

General Disclaimer

One or more of the Following Statements may affect this Document

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.
- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.
- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.
- This document is paginated as submitted by the original source.
- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.

JMK

MS C-16246

28 NOVEMBER 1975

3.8.76

NASA CR-

147861

LMSC-D462467

111526

New

DESIGN, FABRICATION, AND TEST OF A TRACE CONTAMINANT CONTROL SYSTEM

APPENDICES A AND B

(NASA-CR-147861) DESIGN, FABRICATION, AND
TEST OF A TRACE CONTAMINANT CONTROL SYSTEM.
APPENDIXES A AND B (Lockheed Missiles and
Space Co.) 136 p HC \$6.00

N76-31909

CSCL 06K

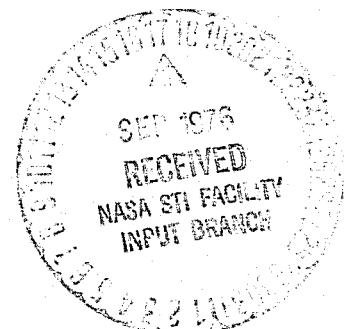
Unclassified
G3/54 01746

PREPARED UNDER
CONTRACT NO. NAS-1-11526

BIOTECHNOLOGY ORGANIZATION

LOCKHEED MISSILES & SPACE COMPANY, INC.

SUNNYVALE, CALIFORNIA



Appendix A

NONMETALLIC MATERIALS LIST

CREW SYSTEMS DIVISION SSP ETC 'LSS' MATERIALS REVIEW BOARD
(CSD MRB)
NONMETALLIC MATERIALS MASTER LOG

FIG. 1. OF

MSF Fccr 1033 (Apr 77)

NASA - MSC

CREW SYSTEMS DIVISION SSP ETC LSS MATERIALS REVIEW BOARD
(CSD/MRB)
NONMETALLIC MATERIALS MASTER LOG

PAGE 2 OF

NEW CHARTERS OR COMPOSITIONS OF ACTS AND

CREW SYSTEMS DIVISION SSP ETC LSS MATERIALS REVIEW BOARD
(CSD/MRB)
NONMETALLIC MATERIALS MASTER LOG

PAGE 3 OF

THE CONDITIONS OF ISSUANCE OF ACCEPTANCES

CREW SYSTEMS DIVISION SSP ETC LSS MATERIALS REVIEW BOARD
(CSD MRB)
NONMETALLIC MATERIALS MASTER LOG

VIA

PAGE 4 OF

							CSD MRB APPROVAL CONCURRENCE				
											SUBSYSTEM
Trace Contaminant Control System											
5 and 15 Volt Power Supplies											
CC-201 through CC-211											
SUBSYSTEM WARRIOR FOR SESSIONS							C-1-AIRPORT				
LINE NO.	WAIVER REQUEST NUMBER	MATERIAL GENERIC NAME	MANUFACTURER AND MATERIAL SPECIFICATION	MANUFACTURER'S MATERIAL DESIGNATION	INTENDED MATERIAL USAGE	USAGE CATEGORY CSD-SS-012	USAGE ENVIRONMENT	WT. (LBS.)	EXP. AREA (IN ²)	BOARD DECISION	REMARKS OR RECOMMENDATIONS
1		Vinyl	~	Poly Vinyl Chloride	Capacitor Sleeving	" F	Cabin Air	<0.01	<20		
2		Teflon	~	Tetra Fluoro Ethylene	Conductor Insulation	" "	"	<0.01	<5		
3		Shrink Tubing	~	Irradiated Poly Olefin	Component Sleeving	" "	"	<0.01	<2		
4		Fibre Board	Lambda	Phenolic Impregnated Fibre Board	Circuit Board	" "	"	<0.1	<30		
5		Sleeving	~	Silicon Rubber Coated Fibre-Glass	Wire Sleeving	" "	"	<0.1	<20		
6		Insulation	Lambda	Varnish Impregnated Fibre Glass	Transformer Insulation	" "	"	<0.1	<5		
7		Insulation	Lambda	Varnish Impregnated Paper	Transformer Insulation	" "	"	<0.1	<20		
8		Phenolic	~	Phenolic Impregnated Fibres	Resistor Casings	" "	"	<0.01	<2		
9		Epoxy	~	Epoxy	Capacitor Potting	" "	"	<0.1	<2		
10		Bakelite	~	Phenolic Resin	Switch Casing	" "	"	<0.1	<1		
11		Bakelite	~	Phenolic Resin	Terminal Strip	" "	"	<0.05	<5		
12		Mica	~	Mica	Semiconductor Insulation	" "	"	<0.01	<2		
13		Silicone	✓	Silicone Oil	Heat Sink Compound	" "	"	<0.01	<2		
14		Paint	✓	Vinyl Paint	Paint Exterior of Supplys	" "	"	<0.05	<500		
MRB COMMENTS OR CONDITIONS OF ACCEPTANCE											

CREW SYSTEMS DIVISION SSP ETC/LSS MATERIALS REVIEW BOARD
(CSD/MRB)
NONMETALLIC MATERIALS MASTER LOG

PAGE 5 OF

WAS CONVICTED OF CONSPIRING TO DESTROY PROPERTY

CREW SYSTEMS DIVISION SSP ETC/LSS MATERIALS REVIEW BOARD
(CSD MRB)
NONMETALLIC MATERIALS MASTER LOG

PAGE 6 OF

WITH COMMENTS OR SUGGESTIONS OF ACCEPTANCE.

ORIGINAL PAGE IS
OF POOR QUALITY

CREW SYSTEMS DIVISION SSP ETC/LSS MATERIALS REVIEW BOARD
(CSD/MRB)
NONMETALLIC MATERIALS MASTER LOG

PAGE 7 OF 8

MRB COMMENTS OR CONDITIONS OF ACCEPTANCE

CREW SYSTEMS DIVISION SSP ETC LSS MATERIALS REVIEW BOARD
 (CSD MRB)
 NONMETALLIC MATERIALS MASTER LOG

PAGE 8 OF

CSD MRB APPROVAL (Concurrent)													
REQUESTER Trace Contaminant Control System			DATE		CSD MRB APPROVAL (Concurrent)								
SUBJECT Vacuum & Pressure Bleed Valves			ITEM NO. CRY4 & CRV5		REQUESTING ORGANIZATION								
CHARGE NO. Vendor Part No. 2814-1			SUBSTITUTION VARIANCE FOR INIBILITY		CHARGE NO.								
LINE NO.	MATERIAL REQUEST NUMBER	MATERIAL GENERIC NAME	MANUFACTURER AND MATERIAL SPECIFICATION	MANUFACTURER'S MATERIAL DESIGNATION	INTENDED MATERIAL USAGE	USAGE CATEGORY CSD-SS-012	USAGE ENVIRONMENT	WT. (lbs.)	EXP. AREA (in ²)	BOARD DECISION			REMARKS OR RECOMMENDATIONS
										ACPT.	COND. ACPT.	REJ.	
1		Potting	Armstrong Al	Coil Potting Compound S.S. Switzer Assoc.	Coil Potting	-P	Cabin Air	<0.01	<1.0				
2		Dry Film Lubricant	Everlube 620	Molybdenum Disulphide	Lubricant	"	" "	<0.01	<1.0				
3		Plastic	-	Polymide	Switch Bottom	"	" "	<0.1	<1.0				
4		Plastic	-	Diethyl Phthalate	Switch Case	"	" "	<0.1	<1.0				
5		Eylon	-	Nylon	Switch Cover	"	" "	<0.1	<1.0				
6		Viton	-	Viton A	"O" ring	"	" "	<0.1	<1.0				
7		Mylar	-	Mylar	Shim	"	" "	<0.1	<1.0				
MRB COMMENTS OR CONDITIONS OF ACCEPTANCE													

CREW SYSTEMS DIVISION SSP ETC LSS MATERIALS REVIEW BOARD
(CSD MPB)
NONMETALLIC MATERIALS MASTER LOG

PAGE 9

NON-COMMENTS OR CONDITIONS OF ACCEPTANCE

CREW SYSTEMS DIVISION SSP ETC/LSS MATERIALS REVIEW BOARD (CSD/MRB) NONMETALLIC MATERIALS MASTER LOG											PAGE <u>10</u> OF _____		
SUBSYS: Trace Contaminant Control System				DATE		CSD MRB APPROVAL (CONCLUDING)							
ITEM NO. Regenerable Bed Fan				RELATIONSHIP ITEM NO.									
DRAFTER: Vendor Part No. C050K				SUBSTITUTION MANUFACTURER (OR DESIGNER)									
LINE NO.	MANUFACTURER'S REQUEST NUMBER	MATERIAL GENERIC NAME	MANUFACTURER AND MATERIAL SPECIFICATION	MANUFACTURER'S MATERIAL DESIGNATION	INTENDED MATERIAL USAGE	USAGE CATEGORY CSD-SS-012	USAGE ENVIRONMENT	WT. (lbs.)	EXP. AREA (in.)	BOARD DECISION			REMARKS OR RECOMMENDATIONS
										ACPT.	COND. ACPT.	REJ.	
1		Nylon	K806G-4-2	Nylon Insert	Set Screw	E	Cabin Air	<0.01	<0.1				
2		Fiberglass	MIL-W-16878	Polyester Acrylic Coated Fiberglass	Electrical Insulation	"	" "	<0.01	<0.1				Covered with Teflon sleeving
3		Grease	MIL-G-3273	Beacon 325 Grease	Bearing Lubricant	"	" "	<0.01	<0.1				
4		Neoprene	K323-3-5A	Neoprene Rubber-craft No. 2	Grommet	"	" "	<0.01	<0.1				
5		Nylon	K378-3	Nylon Zeckesser Co. Inc.	Clamp	"	" "	<0.01	<0.1				
6		Nylon	K7046-2	Nylon Insert	Setscrew	"	" "	<0.01	<0.1				
7		Varnish	KR377-3	General Electric 1201 Glyptol	Insulating Finish	"	" "	<0.01	<1.0				
8		Fiberglass	MIL-P-18177	Laminated Fiberglass Nema G10	Winding Wedge	"	" "	<0.01	<1.0				
9		Fiberglass	MIL-P-18177	Laminated Fiberglass Nema G10	Stator Lamination	"	" "	<0.01	<1.0				
10		Polyester	KR388-12	Polyester Film Minn Mining No. 56	Insulating Tape	"	" "	<0.01	<0.1				
11		Teflon	KR552-2	Teflon Film Minn Mining Type A	Insulating Tape	"	" "	<0.01	<0.1				
12		Varnish	MIL-I-24092	U53 S Thermo F Modified Polyester	Insulating Varnish	"	" "	<0.01	<0.1				
MRB COMMENTS OR CONDITIONS OF ACCEPTANCE													

ORIGINAL PAGE IS
OF POOR QUALITY

**CREW SYSTEMS DIVISION SSP ETC/LSS MATERIALS REVIEW BOARD
(CSD/MRB)
NONMETALLIC MATERIALS MASTER LOG**

PAGE 11 OF 11

VAR CONVENTS OR CONDITIONS OF ACCEPTANCE

**CREW SYSTEMS DIVISION SSP ETC/LSS MATERIALS REVIEW BOARD
(CSD/MRB)
NONMETALLIC MATERIALS MASTER LOG**

PAGE 12 OF _____

WEB COMMENTS OR CONDITIONS OF ACCEPTANCE

ORIGINAL PAGE IS
OF POOR QUALITY

CREW SYSTEMS DIVISION SSP ETC/LSS MATERIALS REVIEW BOARD
(CSD/MRB)
NONMETALLIC MATERIALS MASTER LOG

100

PAGE 14

ORIGINAL PAGE IS
OF POOR QUALITY

CREW SYSTEMS DIVISION SSP ETC/LSS MATERIALS REVIEW BOARD (CSD/NRB) NONMETALLIC MATERIALS MASTER LOG											MLA	PAGE <u>15</u> OF _____
SUBSYSTEM			DATE	CSD NRB APPROVAL (Concurrent)								
LINE NO.	ITEM NO.	RECEIVING ORGANIZATION										
		SUBSYSTEM MANAGER FOR DECISIONS									CHAIRMAN	
LINE NO.	RELEVER REQUEST NUMBER	MATERIAL GENERIC NAME	MANUFACTURER AND MATERIAL SPECIFICATION	MANUFACTURER'S MATERIAL DESIGNATION	INTENDED MATERIAL USAGE	USAGE CATEGORY CSD-SS-012	USAGE ENVIRONMENT	WT. (lbs.)	EXP. AREA (in ²)	BOARD DECISION	REMARKS OR RECOMMENDATIONS	
1		Viton	-	Viton	"O" ring	F	Cabin Air	<1.0	<10	ACPT. COND. ACPT. REJ.	Gemah and Mornon test connectors used throughout	
WHO COMMITS OR DECLINES OF ACCEPTANCE												

Appendix B

TRACE CONTAMINANT CONTROL SYSTEM
ENGINEERING DRAWINGS

Trace Contaminant Control System Engineering Drawings

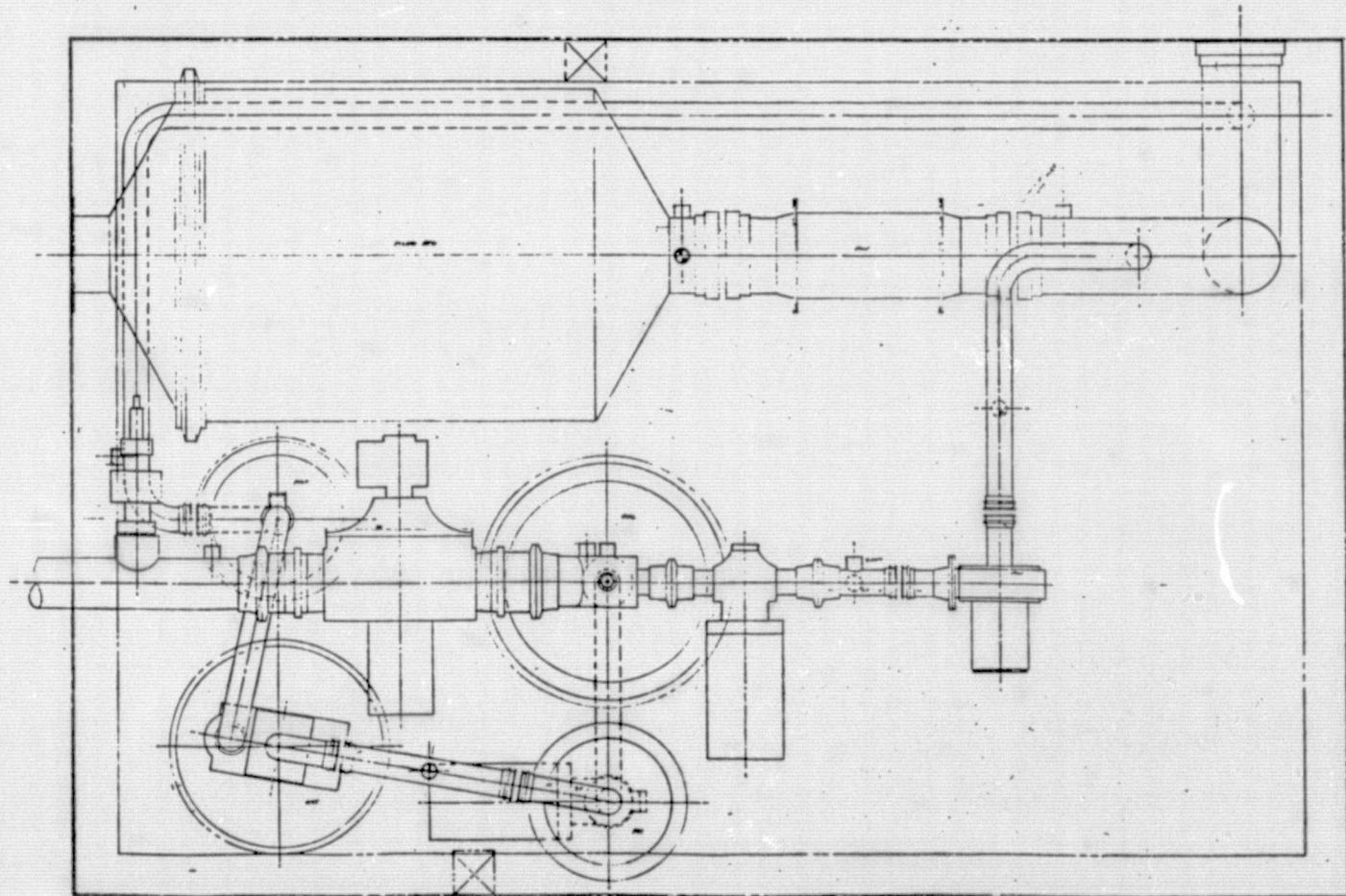
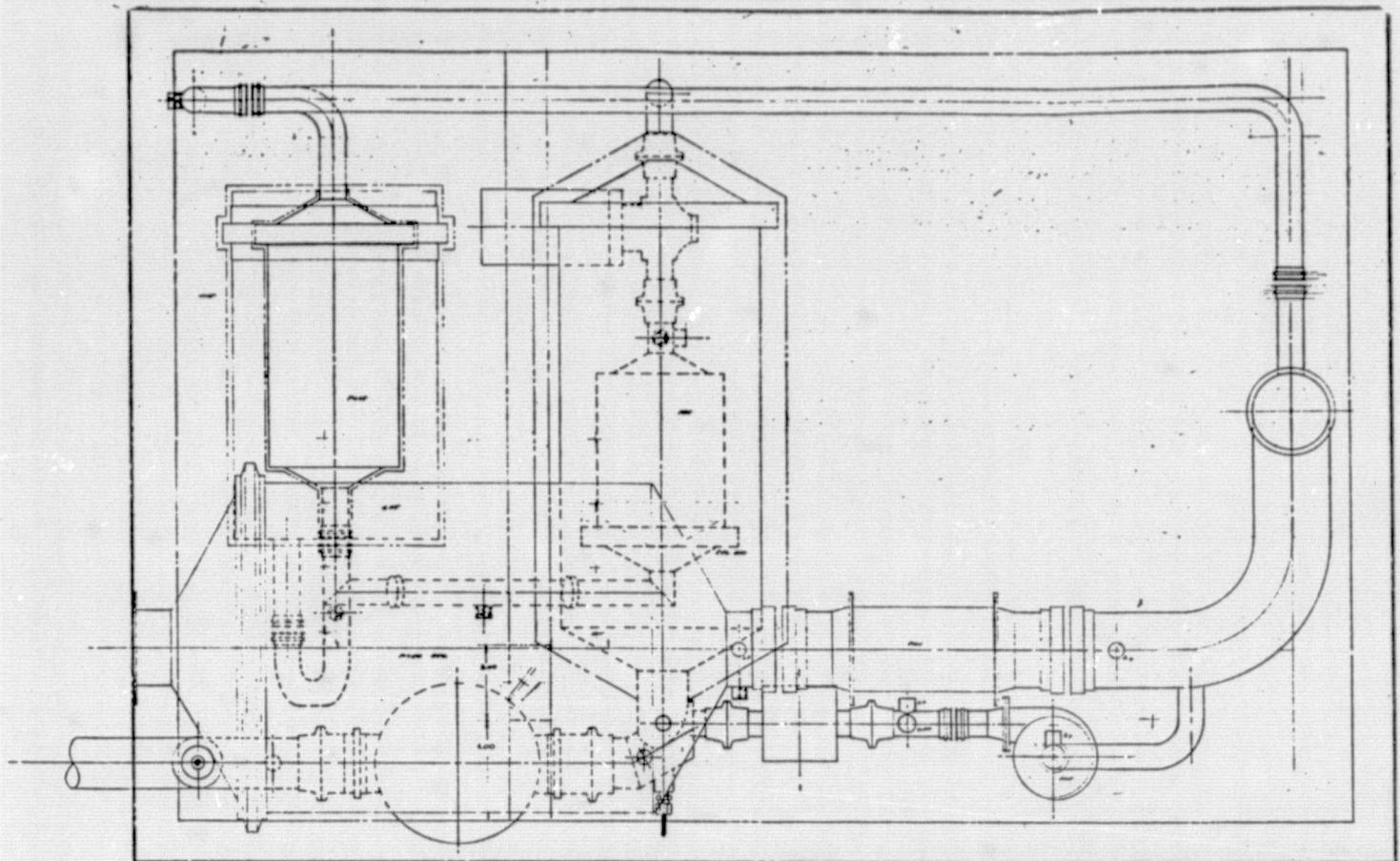
Dwg. No.	Rev.	Title	No. of Sheets	Size
CC-100		TCCS Layout	1	J
CC-101	D	Heat Exchanger Assy. IHCO	1	E
CC-102		Brazed Assy - Catalyst Bed	1	E
CC-103	A	Catalytic Oxidizer Case	1	E
CC-104	A	Brazed End Plate Assy.	1	D
CC-105	B	Washers	1	C
CC-106	A	Spring, Heater	1	C
CC-107	C	Heater Electric	1	D
CC-108	A	Catalyst Retainer	1	D
CC-109	A	Positioner, Heater	1	C
CC-110		Thermal Insulation IHCO	1	E
CC-111	B	Pre- and Post-Sorbent Canister	3	E
CC-112	A	Sol. Valve - 1 inch D.C.D.	1	D
CC-113		Regenerable Bed Canister	3	E
CC-114	B	Regenerable Bed Blower B.C.D.	1	A
CC-115	A	Fixed Bed Fan B.C.D.	1	B
CC-116		Thermocouple Assy. - Regen. Bed	1	C
CC-117		Canister, Fixed Bed	2	E
CC-118	B	Frame	1	R
CC-119		Duct, Pre-Sorbent to Cat. Ox.	1	C
CC-120	B	Duct, Cat. Oxy to Post-Sorb.	1	D
CC-121		Threaded Flange (for 2" valve)	1	C
CC-122	A	Duct, Blower-to-Valve	1	C
CC-123		Duct, Post-Sorbent Exit	1	E
CC-124	B	Duct, Delivery	1	E
CC-125	A	Web-Brkt, TCCS Component Mtg.	1	D
CC-126		Cradle Assy - Component Support TCCS	1	D
CC-127		Brkt - Equip. Mtg.	1	D

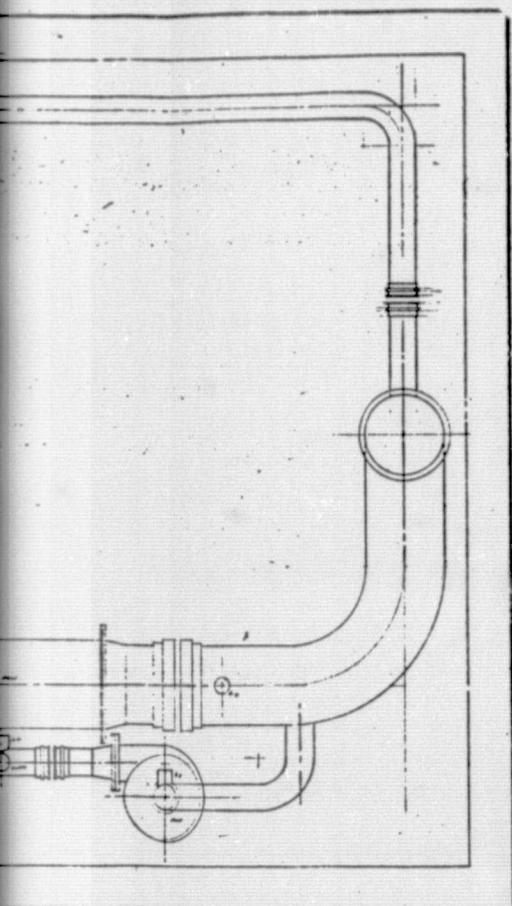
PRECEDING PAGE BLANK NOT FILMED

B- 3

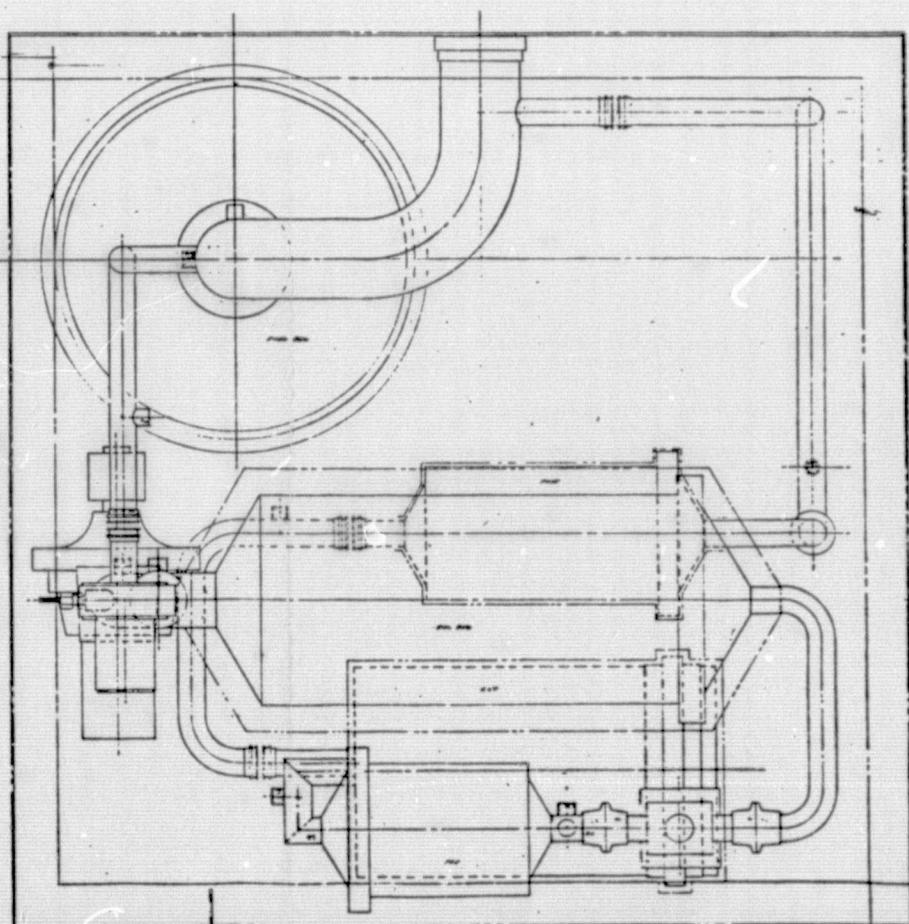
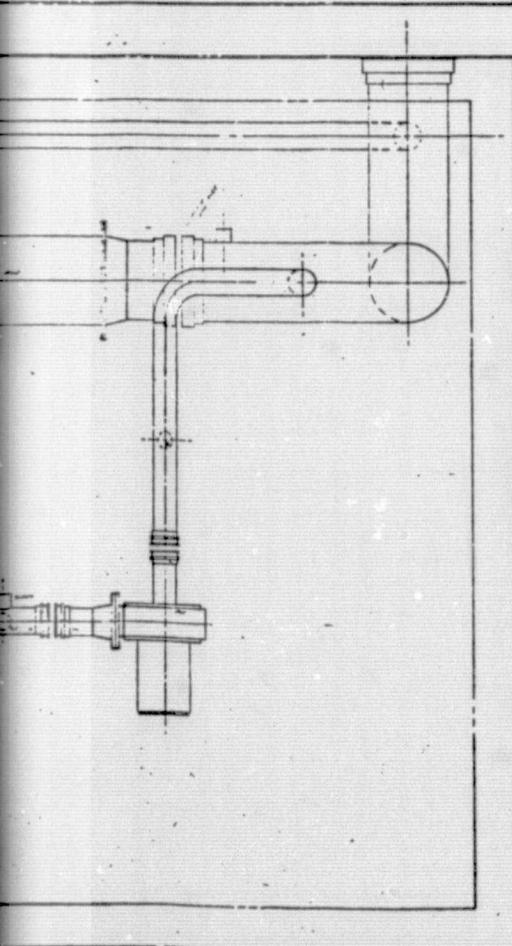
Trace Contaminant Control System Engineering Drawings (continued)

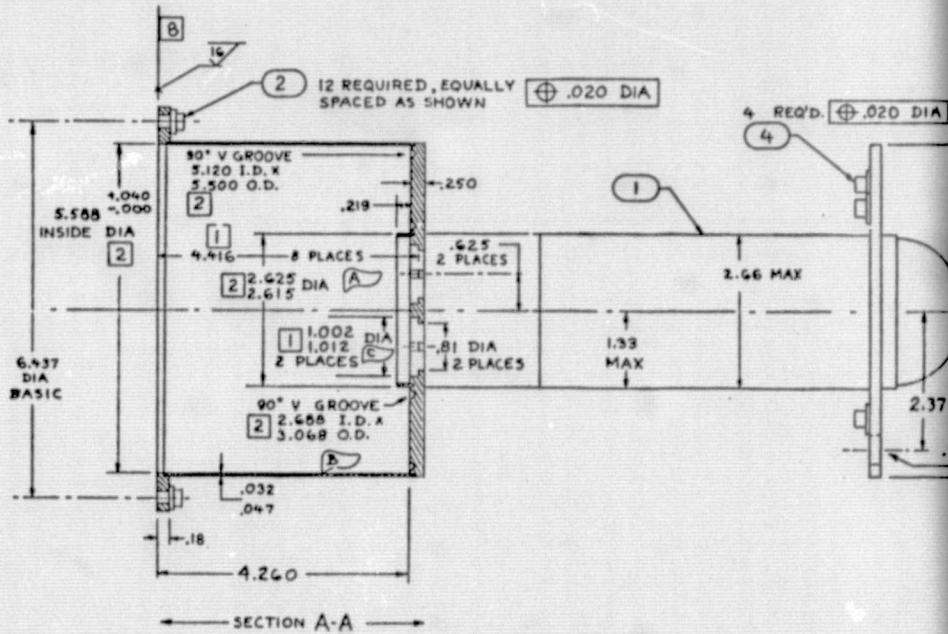
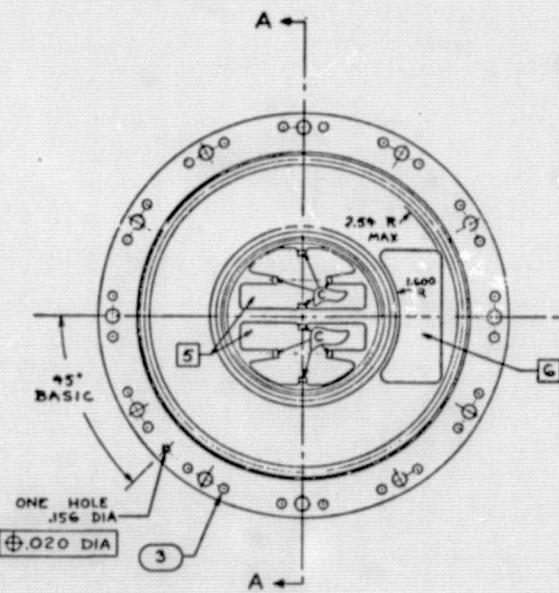
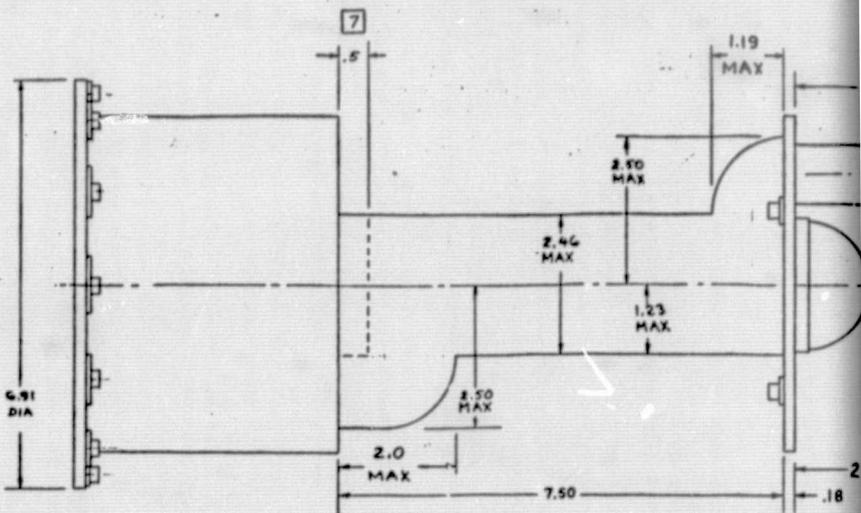
<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>	<u>No. of Sheets</u>	<u>Size</u>
CC-128		Brkt Assy. - Canister Mtg. - TCCS	1	E
CC-129	A	Cover Panels	1	E
CC-130		Brkt - Mtg., Fixed Bed	1	E
CC-131		Shelf, Electronics	1	D
CC-132		Duct, Vacuum to Valve	1	D
CC-133		Brkt Assy - Vac. Valve	1	E
CC-134		Brkt, Blower Sol. Valve	1	E
CC-135		Brkt, Pre-Sorb. Sol. Valve	1	D
CC-136		Brkt, Delivery Duct	1	E
CC-137		Brkt, Blower	1	D
CC-201		TCCS Cable Layout	1	D
CC-202		TCCS Controller	2	D
CC-203		TCCS Power Supply Monitor Circuits	1	D
CC-204		TCCS Over-Current Over Temp Shutdown Circuits	1	D
CC-205		TCCS Δ P Circuits	1	D
CC-206		TCCS Vacuum Sensor Circuits	1	D
CC-207		TCCS Temperature Circuits	1	D
CC-208		TCCS Relay Assembly	1	D
CC-209		TCCS Control Panel Circuits	1	D
CC-210		TCCS Clock Monitor & Reset Circuits	1	D
CC-211		TCCS Control Panel	1	D





CC-100 TCCS LAYOUT



H
G
F
E
D
C
ANOTES

- 1** APPLY .003 TO .006 COATING OF ALUMINUM OXIDE PER AMS 2436 TO SURFACES MARKED **C**. DIMENSIONS APPLY AFTER COATING APPLIED.
- 2** THESE DIAMETERS MUST BE CONCENTRIC WITHIN .020 TIR.
- 3** THIS HEAT EXCHANGER ASS'Y. MUST MEET PERFORMANCE REQUIREMENTS LISTED SEPARATELY.
- 4** MATERIALS & COMPATIBLE WELDING OR BRAZING METHODS ARE TO BE SELECTED TO WITHSTAND THE FOLLOWING TEMPERATURES: 1000°F MAX AT **B**.
- 5** OPEN AREA APPROX. $2 \times 1.62 \times 3.24$ SQUARE INCHES.
- 6** OPEN AREA APPROX. = 1.90 SQUARE INCHES.
- 7** NO CORE IN THIS AREA.
- 8** WAVINESS MUST BE LESS THAN .0005 PER 2 INCHES OF CIRCUMFERENCE, OR .002 T.I.R. AROUND ENTIRE CIRCUMFERENCE.

TEMP. EXCURSION AT A (F°)	NO. OF CYCLES	EXCURSION TIME (HOURS)
→ 1500	2	—
700 → 1200	700	1
1200 → 700	700	4
70 → 1200	20	2
1200 → 70	20	10

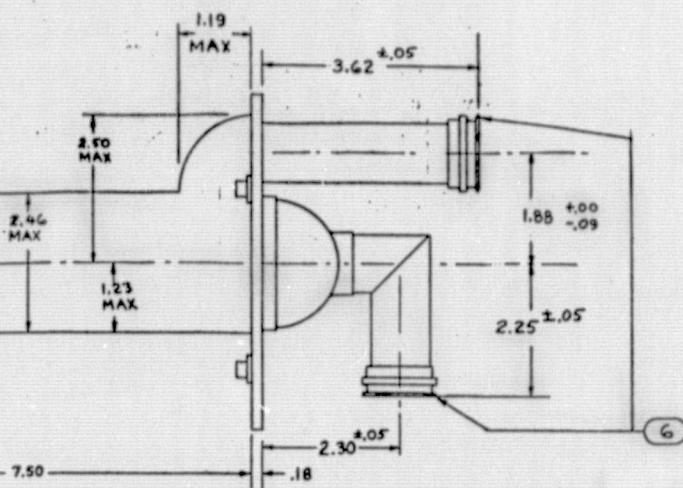
* TEMPS. REMAIN AT THE EXCURSION LIMIT TEMPS. FOR LONGER PERIODS.

ORIGINAL PAGE IS
OF POOR QUALITY

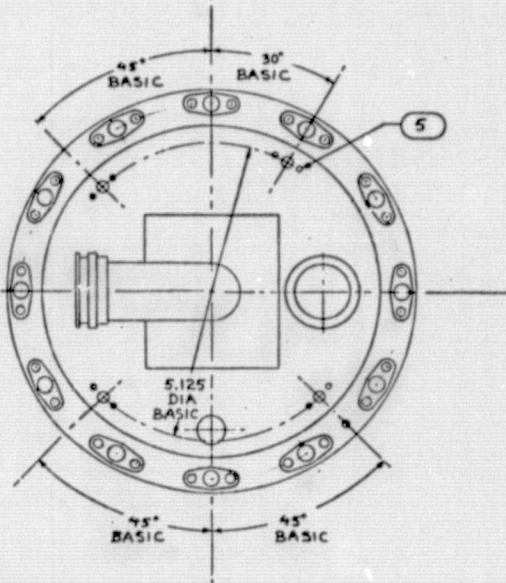
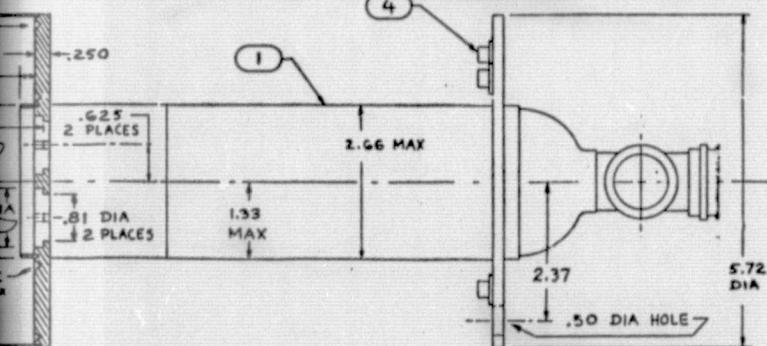
LIMITED
CALENDAR
LIFE

LIMITED
OPERATING
LIFE

REVISIONS		DATE	APPROV'D
ZONE	TR	DESCRIPTION	
A	RELEASED	11-12-72	
B		ADD 2.0 & 1.19 MAX. ITEM 4 DELETE "OR EQUIV", DELETE INLET,OUTLET DUCTS, ADD TBD, AT VENDOR'S REQUEST: 7.50 WAS 7.00; 2.46 MAX WAS 2.35, 2.50 MAX WAS 2.43; NOTE [2] .020 TIR WAS .010. ADDED NOTE [8]	1/11 aw
C		DELETED BEADS & T.B.D. ADDED IN & OUT DUCTS ADDED ITEM G	1/11 1PM aw
D		ADDED .50 DIA HOLE	1/11 aw



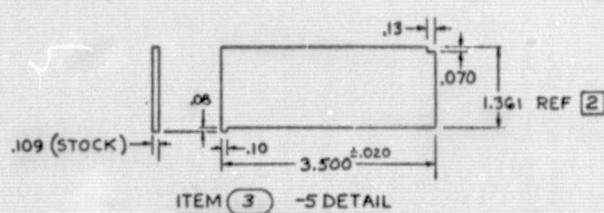
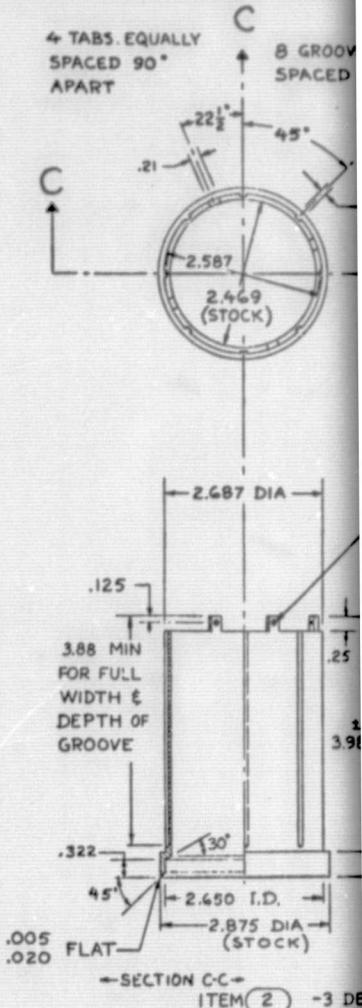
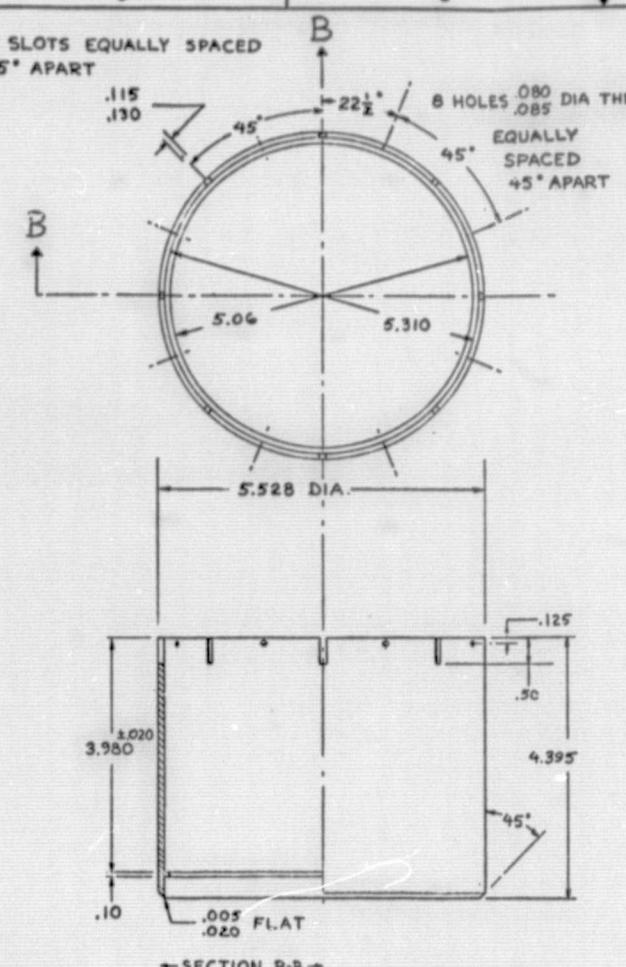
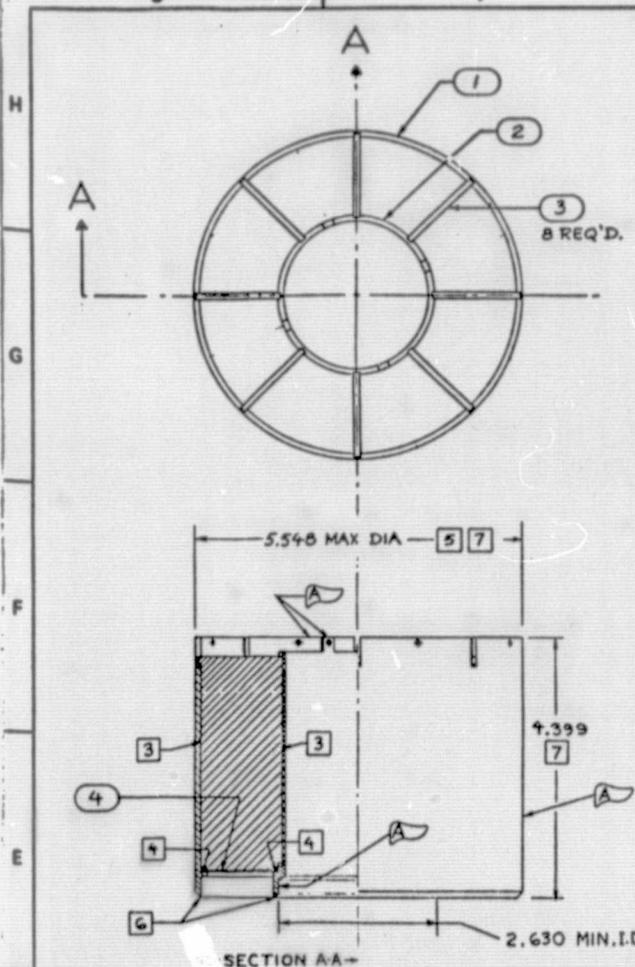
REQUIRED, EQUALLY
AS SHOWN $\odot .020$ DIA



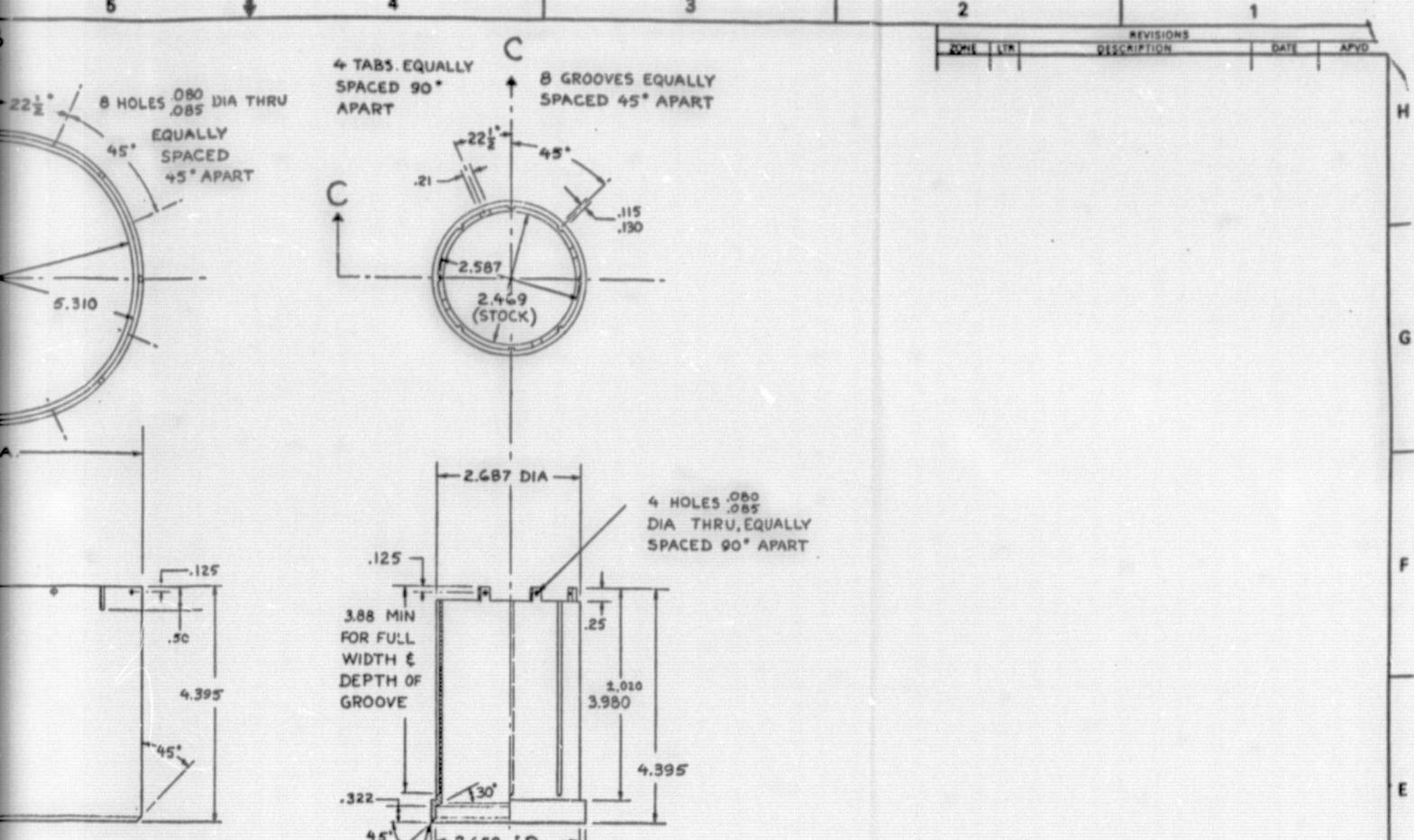
QTY	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT. OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
2	GAMAH F20210 C	TUBE WELD/BRAZE FLANGE	GAMAH DIV. OF STANLEY-DENVER	CRES	6		
8	FOR ITEM 4	RIVET, FLUSH HEAD		CRES	5		
4	LOCKHEED LS-8830-08	B-32 FLOAT PLATE NUT, SELF LOCK.	FINISH: SILVER PLATED	A 286	4		
24	FOR ITEM 2	RIVET, FLUSH HEAD		CRES	3		
12	STD. PRES. STL. CR N5 103798	10-32 FLOAT PLATE NUT, NON-LOCK.	FINISH: SILVER PLATED	A 286	2		
1		HEAT EXCH'R.	4	4	1		

PARTS LIST							
INTERPRET DWG PER				UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS: $\pm 1/16$, DECIMALS: $\pm .03$, $\pm .010$. ANGLES: ± 2 DEG. CONTR. HAS 1-11526. CCA/CEI			
APPO: 1/11/72				DATE: 3-28-72 DR: 1111 APPO: 1/11/72 APPO: 1/11/72 ENRG: CHK: 1/11/72 APPO: 1/11/72 APPO: 1/11/72			
HEAT EXCHANGER ASS'Y. I HCO				LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
SIZE CODE IDENT DRAWING NO.				REV E - CC-101 I.D SCALE: FULL SHEET 1 OF 1			

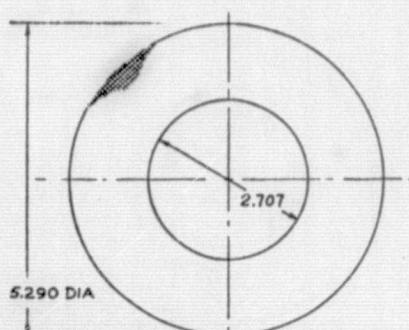
8 7 6 5 4

NOTES

- [1] -501 ASSY. TO BE FURNACE BRAZED USING BRAZE METAL HAVING MELTING POINT OF 1750°F OR MORE.
- [2] THIS DIM. TO BE DETERMINED SO AS TO PROVIDE PROPER BRAZE JOINT CLEARANCES.
- [3] ITEM 3 MUST BE BRAZED TO ITEMS 1 AND 2 WITH BRAZE METAL COMPLETELY FILLING THE JOINT ALONG ENTIRE LENGTH OF EACH MATING SURFACE.
- [4] ITEM 4 MUST BE WELDED OR BRAZED TO ITEMS 1 AND 2 FOR FIRM RETENTION AROUND BOTH CIRCUMFERENCES.
- [5] THESE DIAS. TO BE CONCENTRIC WITHIN .020 T.I.R.
- [6] THESE EDGES MUST LIE IN SAME PLANE WITHIN .005
- [7] AFTER COMPLETION OF BRAZING, APPLY .003 TO .005 COATING OF ALUMINUM OXIDE PER AMS 243G TO SURFACES MARKED [A] NOT INCLUDING 45° CHAMFERS.



-1 DETAIL



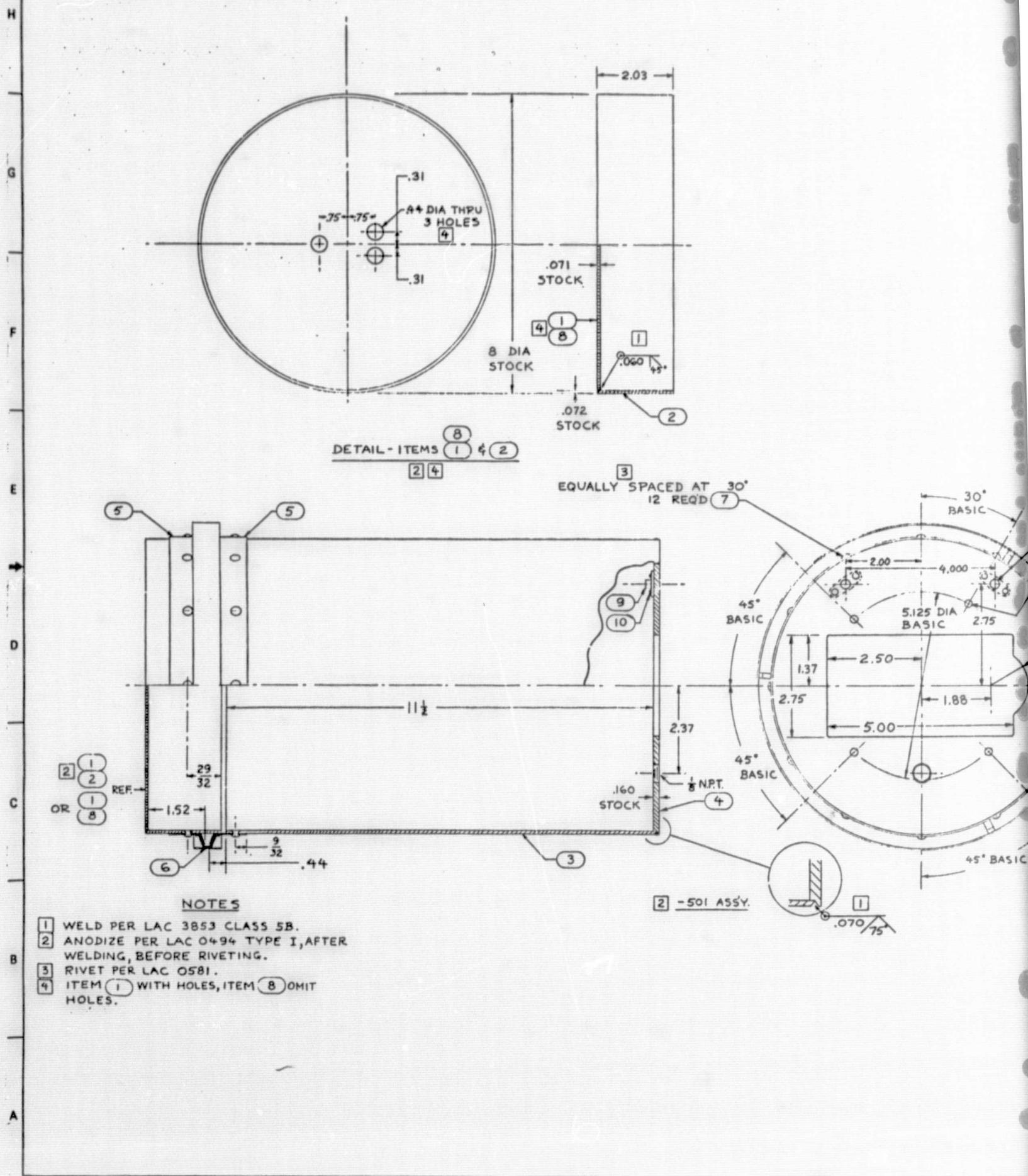
ITEM 4. -7 DETAIL

QTY	CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT. TION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO
1	CC-102-7	SCREEN	30 MESH .013 DIA. WIRE	TYPE 316 STAINLESS STEEL	4C (4)		
8	CC-102-5	FIN	.109 SHEET	NICKEL 200	D7 (3)		
1	CC-102-3	INNER CYL.	2 1/2 DIA. SCHD.40 PIPE	NICKEL 200 4FH	(2)		
1	CC-102-1	OUTER CYL.	5 DIA SCHED.40 PIPE OR .109 SHEET	NICKEL 200 GFH	(1)		
-501							
PARTS LIST							

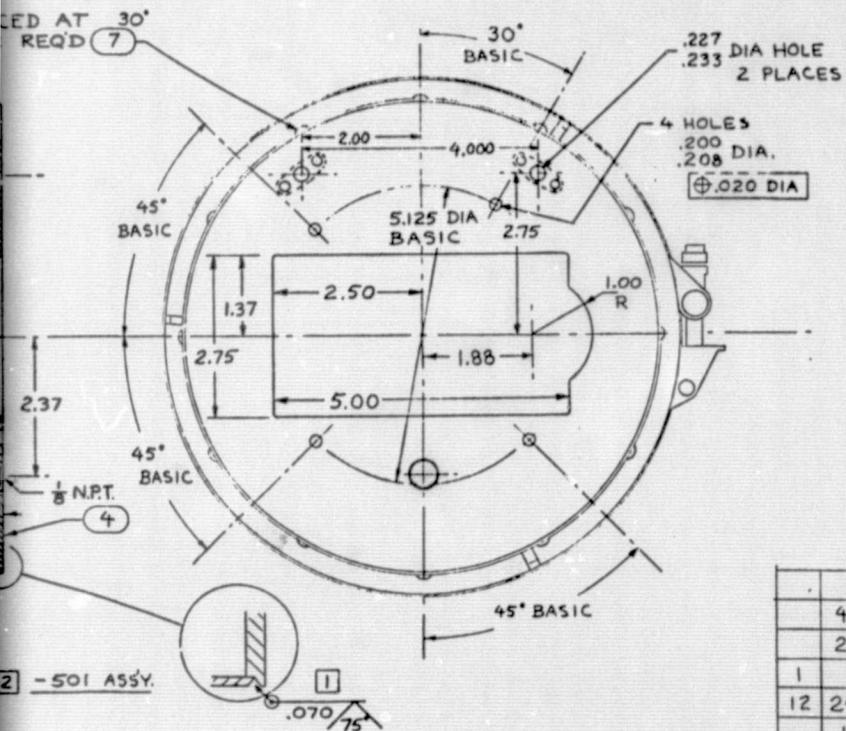
INTERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON:	DATE 11-3-72 DWN 200 APVD <i>[initials]</i>	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA
	FRACTIONS = ± 1/16 DECIMALS = ± .001 .XXX = ± .001 .XXX = ± .010	APVD	BRAZED ASS'Y.-
	ANGLES = ± 2 DEG	ENGRG	CATALYST BED - IHCO
		CHKR <i>[initials]</i> H-75	TCCS
NEXT ASSY USED ON APPLICATION	CONT'D	APVD	SIZE CODE IDENT DRAWING NO E CC-102
CCA/C1/PD	APVD	SCALE FULL	SHEET 1 B-7

FOLDOUT FRAME *2*

8 7 6 5 4



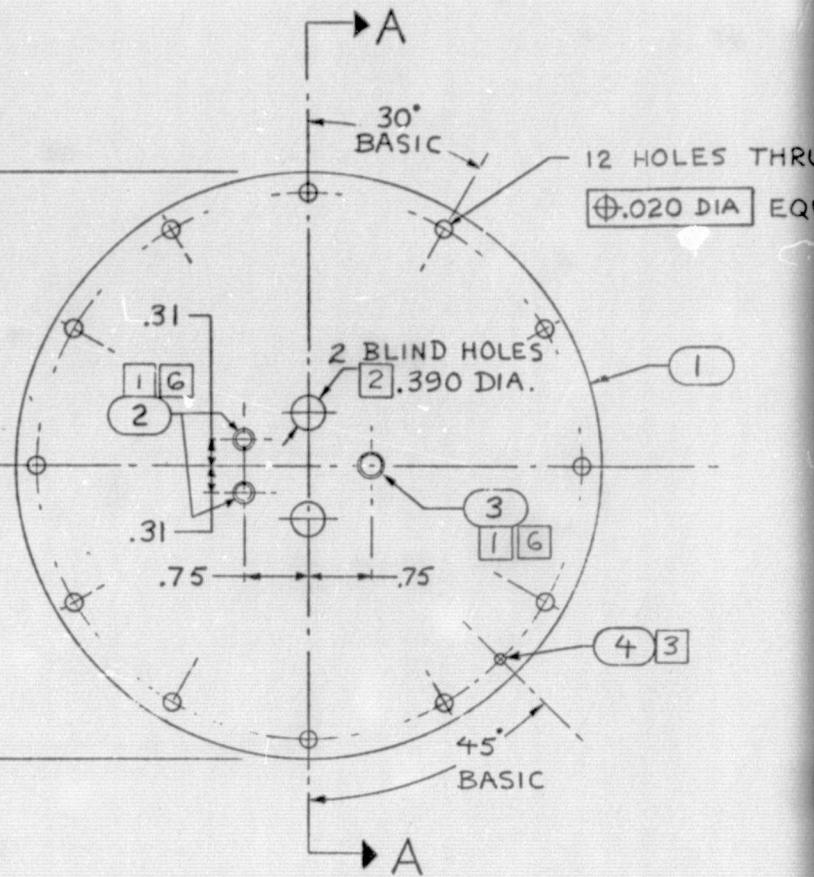
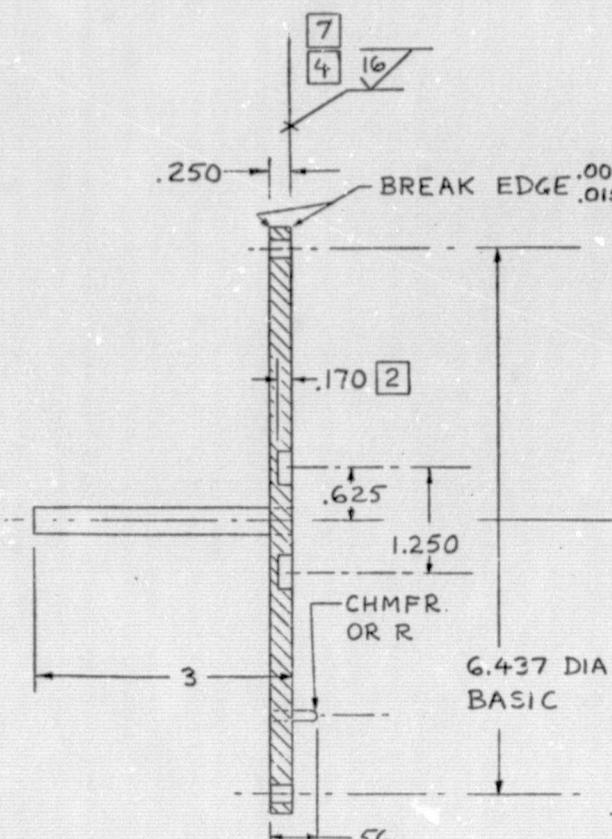
ZONE LTR REVISIONS
 4C, EC A ADD TAPPED HOLE & N.P.T. 3-21-73 AM
 4D, ED ADD ITEMS 9 & 10



QTY	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT. OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO
4	FLUSH HEAD RIVET	FOR ITEM 9			10	
2	FLOATING PLATE NUT #10-32	L5 8830-3 OR EQUIV.			9	
1	-15 DISC, THIN	.071 THICK AL G061 TG QQ A250			8	
12 24	-13 RIVET 100° C'SUNK	MS-20426- DD4-5 2024T4 AL			7	
1	-11 COUPLING	AEROQUIP-MARSHAL MWS3653-KS-874T CRES			6	
1 2	-9 FLANGE	AEROQUIP-MARSHAL SSOD1-B00A ANODIZED AL			5	
1	-7 DISC, THICK	.160 THICK AL G061 TG QQ A250			4	
1	-5 CYL, LONG	8" O.D. X .072 WALL AL TUBE G063TG TUBE SALES			3	
1 1	-3 CYL, SHORT	8" O.D. X .072 WALL AL TUB G063TG			2	
1	CC-103-1 DISC, THIN	.071 THICK AL G061 TG QQ A250			1	
502 -501						

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON FRACTIONS = ± 1/16 DECIMALS: .X = ± .1 .XX = ± .01 .XXX = ± .001		DATE 11-27-72 LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA	
		ANGLES = ± 2 DEG		APVO	
		NEXT ASSY USED ON CONTR		APVO	
APPLICATION		CCA/C1/FD		SIZE CODE IDENT DRAWING NO E CC-103 REV A	
		SCALE FULL		SHEET 1 OF 1	

D

NOTES

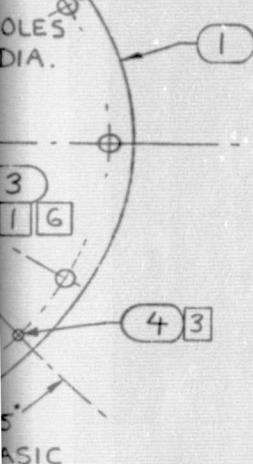
- B 1 HOLE DIAS. IN ITEM 1 TO BE DETERMINED TO PROVIDE PROPER BRAZING CLEARANCES FOR ITEMS 2 AND 3. MELTING TEMP C = BRAZE METAL MUST BE 1750°F OR HIGHER.
- 2 AFTER BRAZING, APPLY .003 TO .006 (TOTAL BOTH COATS) OF PURE ALUMINA OVER NICKEL ALUMINIDE BASE PER AMS-2436 TO SIDE & BOTTOM SURFACES OF THE TWO BLIND HOLES. DIMENSIONS APPLY AFTER COATING APPLIED.
- 3 PRESS FIT, AFTER NOTES 1,2,4 & 7 ARE MET.
- 4 SURFACE FINISH & FLATNESS APPLY INWARD FROM BOLT CIRCLE TO $2\frac{1}{4}$ DIA. PERFORM THIS FINAL GRINDING AFTER NOTES 1 & 2 ARE COMPLETED. SEE NOTE 7.
- A 5 VAPOR DEGREASE PER LAC-0170.
- 6 -503 ASSY IS IDENTICAL TO -501 ASSY EXCEPT THAT ITEMS (2) & (3) AND

- 7 THEIR HOLES ARE OMITTED.
- FLATNESS REQUIRED INWARD FROM BOLT CIRCLE TO $2\frac{1}{4}$ DIA : WAVINESS LESS THAN .0005 PER 3 INCHES OF CIRCUMFERENCE, OR .001 T.I.R. AROUND ENTIRE CIRCUMFERENCE

REVISIONS			
ZONE LTR	DESCRIPTION	DATE	APPD
A	NOTES 4, 7 2 1/4 DIA WAS 5 1/2	7/14/73	aw
B	ADD NI ALUMINIDE TO 2	5/1/73	aw

12 HOLES THRU .212 DIA
.218

[.020 DIA] EQUALLY SPACED



MITTED.
NWARD FROM BOLT
AVINESS LESS THAN
OF CIRCUMFERENCE,
ENTIRE CIRCUMFERENCE.

QTY REQD	QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.	PARTS	LIST
									G	-503

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 11-28-72 DR aw APPD APPD ENGRG CHK P.B. 7/14/73 APFD	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA BRAZED END PLATE ASSY. IHC O TCCS
NEXT ASSY	USED ON	CONTR	SIZE D DRAWING NO. CC-104 REV B	
APPLICATION	CCA/CEI	APPD SCALE FULL	SHEET 1 OF 1	

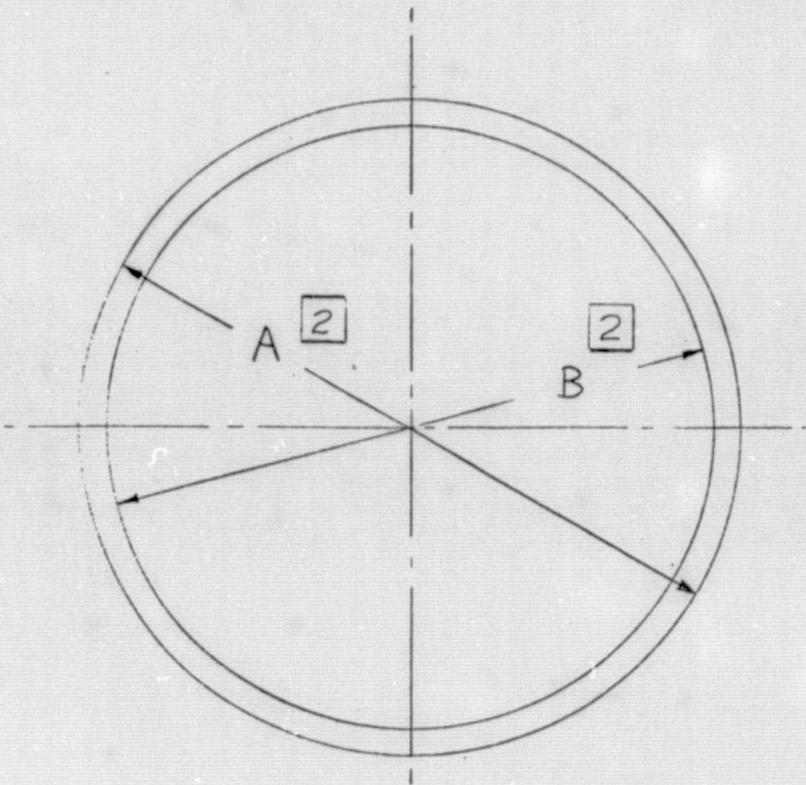
LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE
-----------------------	------------------------

D

C

B

A

NOTES

- I. VAPOR DEGREASE PER LAC-0170.
 2] DIAS. A & B CONCENTRIC .030 TIR.

3.250	2.635				-3	WA
5.578	5.000			CC-105 -1	WA	
A	B	QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOME DE	
O.D.	I.D.					

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE DR APPD APPD ENGRG CHK APPD APPD
NEXT ASSY	USED ON	CONTR	
	APPLICATION	CCA/CEI	APPD

		REVISIONS		
LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE LTR	DESCRIPTION	DATE APPD
		A	3.250 WAS 3.25; 5.000 WAS 5.00 ADD NOTE 2.	3/14/73 AW Rm
		B	MAT'L. WAS .010 ANNEALED COPPER PER QQ C-576	4/23/73 aw

D

C

B

A

02.635		-3	WASHER					2
8 5.000		CC-105 -1	WASHER	STAINLESS STEEL .006 SHEET	TYPE 316 (ELC OPTIONAL)			1
B	QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
I.D.								

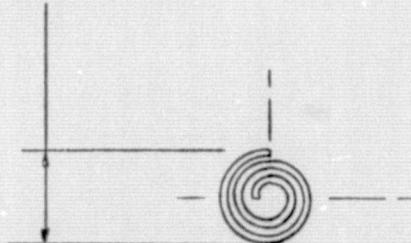
PARTS LIST

INTERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	DATE 11-29-72		LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
		DR	aw			
		APPD			WASHERS	
		APPD			I H CO	
		ENGRG		TCCS		
		CHK <i>R.B. Marin 2-14-73</i>				
		APPD		SIZE	CODE IDENT	DRAWING NO.
	CONTR			C		CC-105
ASSY	USED ON	APPD		REV		B
APPLICATION		SCALE NONE		SHEET 1 OF 1		

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE
-----------------------------	------------------------------

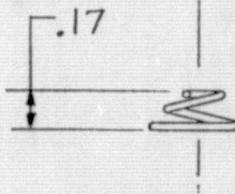
D

CIRCUMSCRIBED
DIA = .430



ACTIVE TURNS = 1
SOLID HEIGHT = .022
SPIRAL: RIGHT OR LEFT HAND

C



B

A

2			
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOM D

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG		DATE
		CONTR		DR
			CCA/CEI	APPD
				APPD
				ENGR
				CHK
				APPD
				APPD

LIMITED
CALENDAR
LIFE

LIMITED
OPERATING
LIFE

		REVISIONS			
ZONE	LTR	DESCRIPTION		DATE	APPD
C3 B2	A	WIRE DIA WAS .026. ADDED SPIRAL; R OR L HAND		7/73	aw

LEFT HAND

D

C

↔

B

A

2			.022 DIA. WIRE	TUNGSTEN		
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION	ZONE ITEM NO.

PARTS LIST

RPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	DATE 12-1-72 DR aw APPD APPD ENRG CHK L.B. Maria 2-18-73 APPD CONTR APPD
ASSY USED ON APPLICATION		SPRING, HEATER IHC O TCCS SIZE CODE IDENT DRAWING NO. REV C - CC-106 - A SCALE 2:1 SHEET 1 OF 1	

8

7

6

5

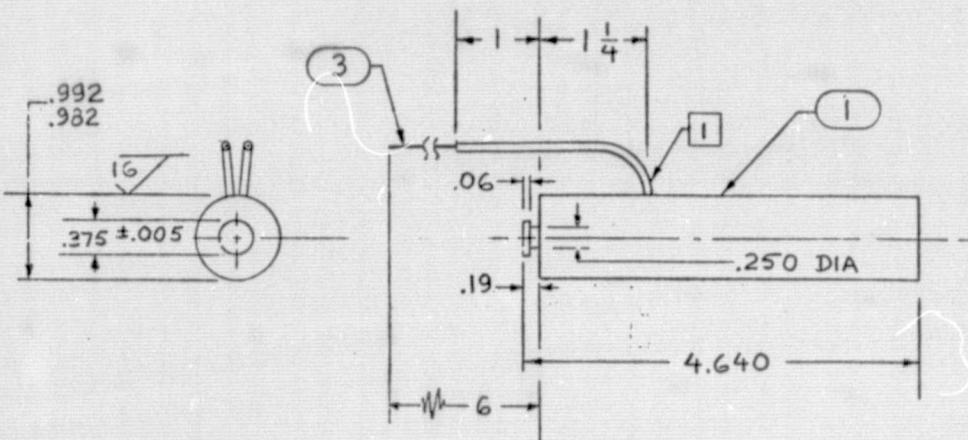
4

REQUIREMENTS

OPERATING CYLINDER TEMP 10
OPERATING POWER 70 WATTS

120 VOLTS
400 Hz.

COLD R WITHOUT LEADS = 184



D

C

B

A

NOTES

- INSULATION MUST WITHSTAND 1500°F

REQUIREMENTS

ING CYLINDER TEMP 1000°F
TING POWER 70 WATTS AT
120 VOLTS RMS,
400 Hz.
WITHOUT LEADS = 184 JL

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE
-----------------------	------------------------

REVISIONS		DATE APPD
ZONE LTR	DESCRIPTION	
A	ADDED .250 DIA. LENGTHENED LEAD INSUL BY 1 IN.	2/7/73 JW AW
B	ADDED 16 TO CYL.DIA.	4/14/73 JW AW
C	DELETED ITEM 2 (.032 CHRO- MEL - ALUMEL THERMOCOUPLE) ITEM 1 MAT'L. WAS HASTELLOY C. REQUIREMENTS: CYL. TEMP. WAS 1500°F MAX., POWER WAS 74 WATTS AT 115 VAC	16/73 JW AW

D

C

B

1 PR		POWER LEAD	WIRE DIA .052 MAX				3
1		CYLINDER	STAINLESS STEEL	TYPE 316			1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.

PARTS LIST

INTERPRET DWG PER	LESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	DATE 12-1-72 DR AW APPD APPD ENGRG CHK R.B. - MAILED 2-14-73	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA HEATER, ELECTRIC
NEXT ASSY	USED ON	SIZE D DRAWING NO. CC-107 REV C	COV'R APPD SCALE: FULL SHEET 1 OF 1

A

B-12

FOLDOUT FRAME 2

8

7

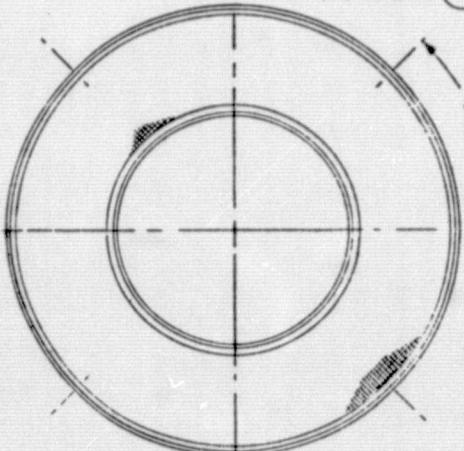
6

5

4

D

A



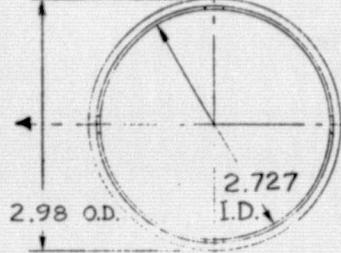
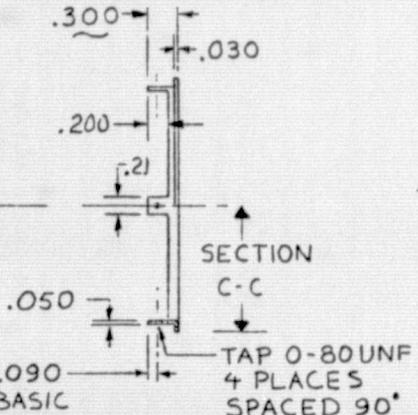
C

A

-501 ASS'Y. [1]

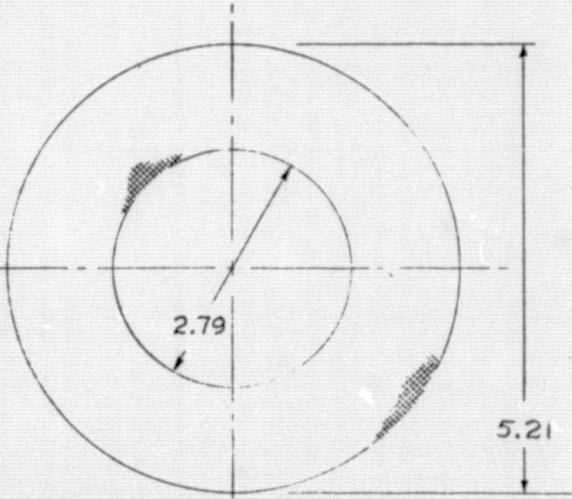
B

C

ITEM (2) -3 DETAIL

B

B

5.02
I.D.ITEM (3) -5 DETAILNOTES

- [1] OUTSIDE DIA OF ITEM (1) MUST BE CONCENTRIC TO INSIDE DIA OF ITEM (2), WITHIN .020.
RESISTANCE WELD ITEM (3) TO ITEMS (1) AND (2) AT SPOTS SPACED $\frac{1}{8}$ INCH APART AROUND CIRCUMFERENCE OF EACH.
WELD PER LAC 1421 CLASS C.
2 VAPOR DEGREASE PER LAC 0170.

4

3

2

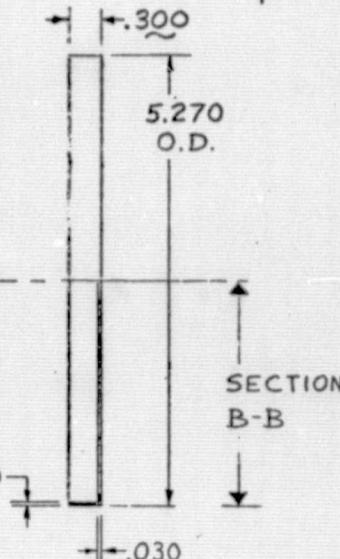
1

REVISIONS

ZONE	LETTR	DESCRIPTION	DATE	APPD
78	A	ADD .203 DIM.	1/4/73	QWJ

LIMITED
CALENDAR
LIFE

LIMITED
OPERATING
LIFE



ITEM (1) -1 DETAIL

5.21

B

D

C

B

-5 DETAIL

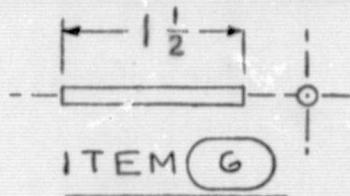
QTY	CODE	PART OR	NOMENCLATURE OR	MATERIAL DESCRIPT-	MATERIAL	ZONE	ITEM
REQD	IDENT	IDENTIFYING NO.	DESCRIPTION	ION OR NOTE	SPECIFICATION		NO.
12		-7	*O-BO SCREW $\frac{1}{8}$ LONG	BINDER OR FILISTER OR PAN HEAD ALUMINUM SCR. PROOF	TYPE 305(18-8)	4	
1		-5	SCREEN	.30 MESH .013 DIA WIRE	TYPE 316 S.S.	3	
		-3	SMALL RING	$\frac{3}{8}$ PLATE	TYPE 316 STAINLESS STEEL	2	
1		CC-108 -1	LARGE RING	$\frac{3}{8}$ PLATE	TYPE 316 STAINLESS STEEL	1	
-501 PARTS LIST							

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $X = \pm .1$ $XX = \pm .03$ $XXX = \pm .010$ ANGLES = ± 2 DEG	DATE: 2-5-72 DR: QWJ	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA
			APPD	CATALYST RETAINER
			APPD	IHCO T C C S
			ENGRG CHK L.B. 2-14-73	
NEXT ASSY	USED ON	CONTR	APPD	SIZE CODE IDENT DRAWING NO. D CC-108 A
APPLICATION	CCA/CEI	APPD	SCALE: FULL	SHEET 1 OF 1

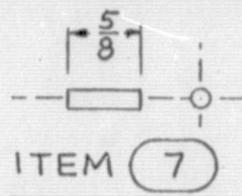
B-13

FOLDOUT FRAME

2



D



ITEM 7

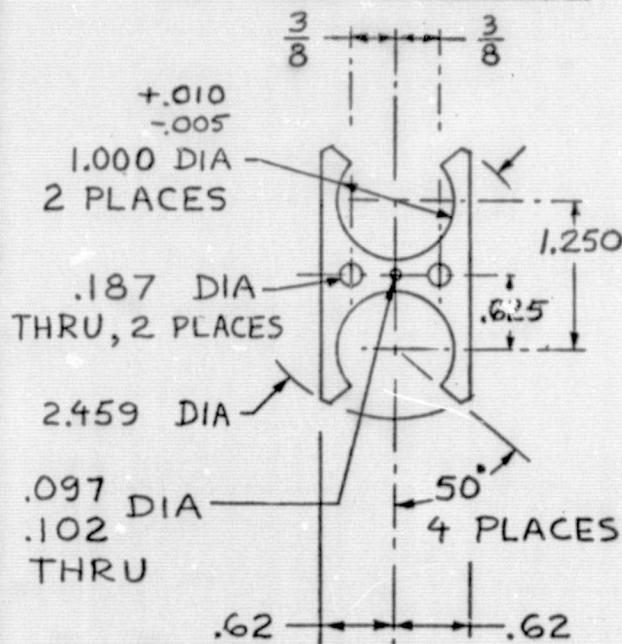
3

- THREAD
2-56 UNC 2

LIMITED
CALENDAR
LIFE

LIMITED
OPERATING
LIFE

ITEM (1) - I DETAIL



NOTES :

- B** I. SOLVENT CLEAN PER LAC-0170.

		-13	S
1		-11	S
1		-9	W
5		-7	W
2		-5	#2
1		-3	3/3
2		CC-109-1	PC
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NO.

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.X X = $\pm .03$.X XX = $\pm .010$ ANGLES = ± 2 DEG	DAT DR APP APP ENG CH APP APP
NEXT ASSY	USED ON	CONTR	
	APPLICATION	CCA/CEI	

THREAD
2-56 UNC2

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE
-----------------------	------------------------

ZONE	LTR	REVISIONS	DESCRIPTION	DATE	APPD
C4	A	.625 WAS .750; 1.250 WAS 1.500	1.250 WAS 1.500	2/19/75	AW B&K

~ $\frac{3}{8}$

2

5

WELD THRU HOLE
IN WASHER

④ & ⑤ SUBASS'Y.

1	-13	SPACER	.148 O.D. X .015W	304 321 TUBE	7
1	-11	SPACER	.148 O.D. X .015W	304 OR 321 TUBE	6
1	-9	WASHER	NAS620C2	CRES	5
5	-7	WASHER	AN960 C 3	CRES	4
2	-5	#2-56 NUT	LS-8889-02A	CRES	3
1	-3	$\frac{3}{32}$ DIA ROD	TYPE 304 CRES	QQS-763	2
2	CC-109-1	POSITIONER	.020 CRES SHT.	MIL-S-5059 TYPE 302	1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION
PARTS LIST					

INTERP DWG PER

UNLESS OTHERWISE
SPECIFIED DIM. ARE IN
INCHES. TOLERANCES ON:
FRACTIONS = $\pm 1/16$
DECIMALS: .X = $\pm .1$
.XX = $\pm .03$
.XXX = $\pm .010$
ANGLES = ± 2 DEG

DATE DEC. 11 '72

DR AW

APPD

APPD

ENGRG

CHK R.B. Maine 2-19-75

APPD

LOCKHEED MISSILES & SPACE COMPANY
A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION
SUNNYVALE, CALIFORNIA

POSITIONER, HTR.

I H C O T C C S

SIZE	CODE IDENT	DRAWING NO.	REV
C		CC-109	A

SCALE : FULL

SHEET 1 OF 1

ASSY USED ON
APPLICATION

CONTR

CCA/CEI



D

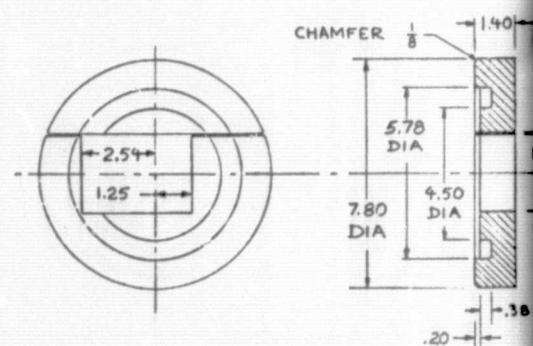
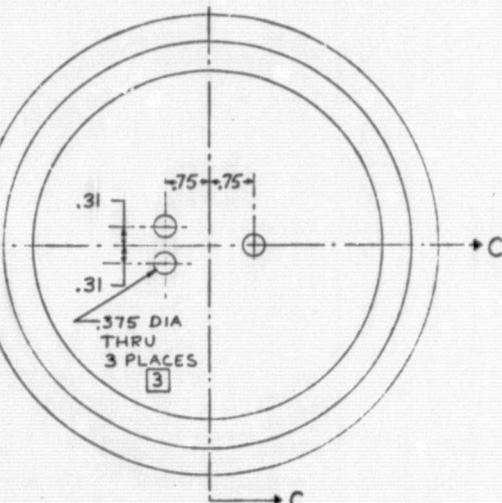
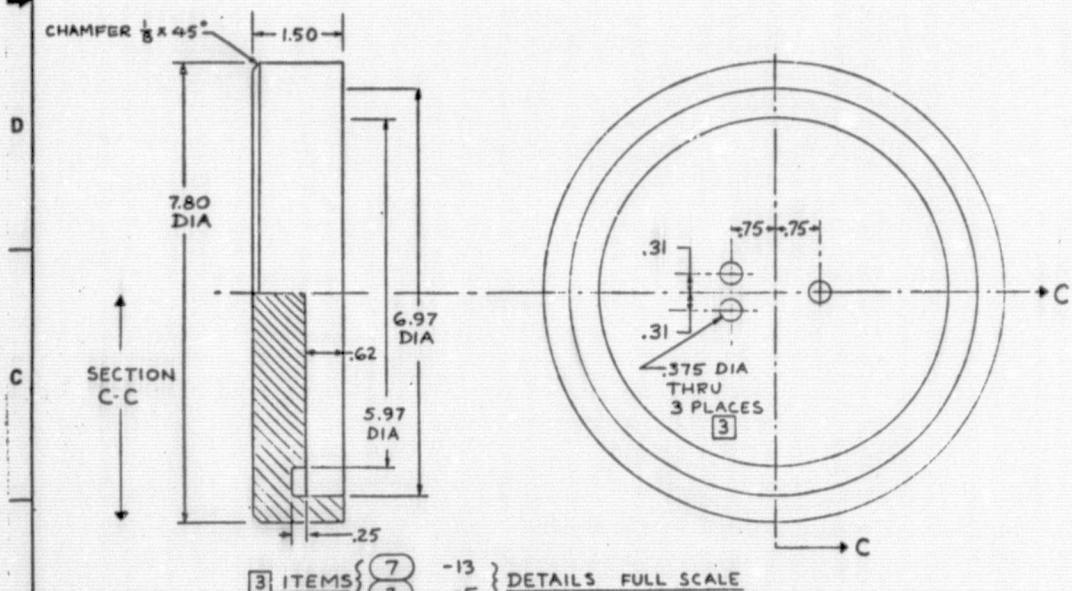
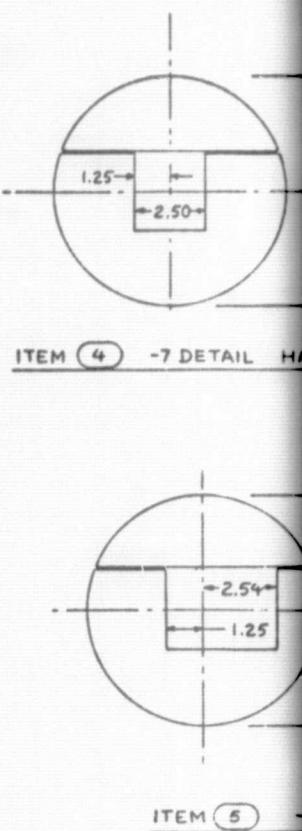
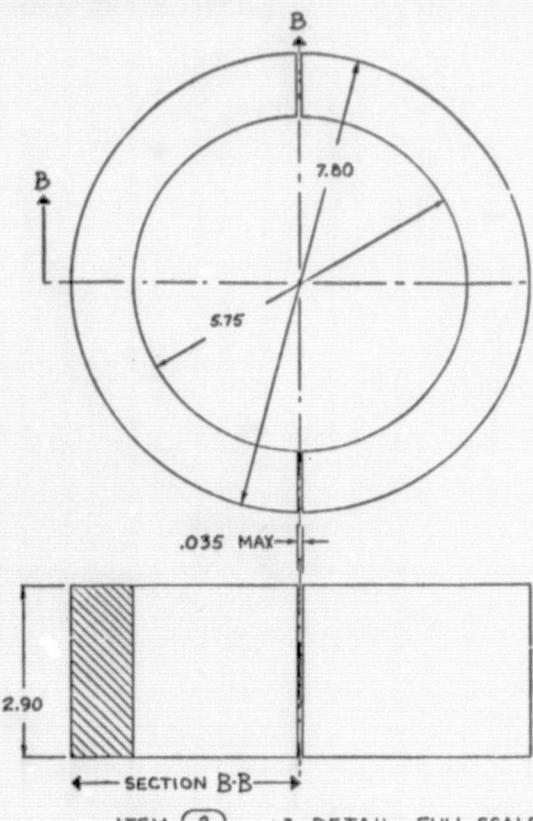
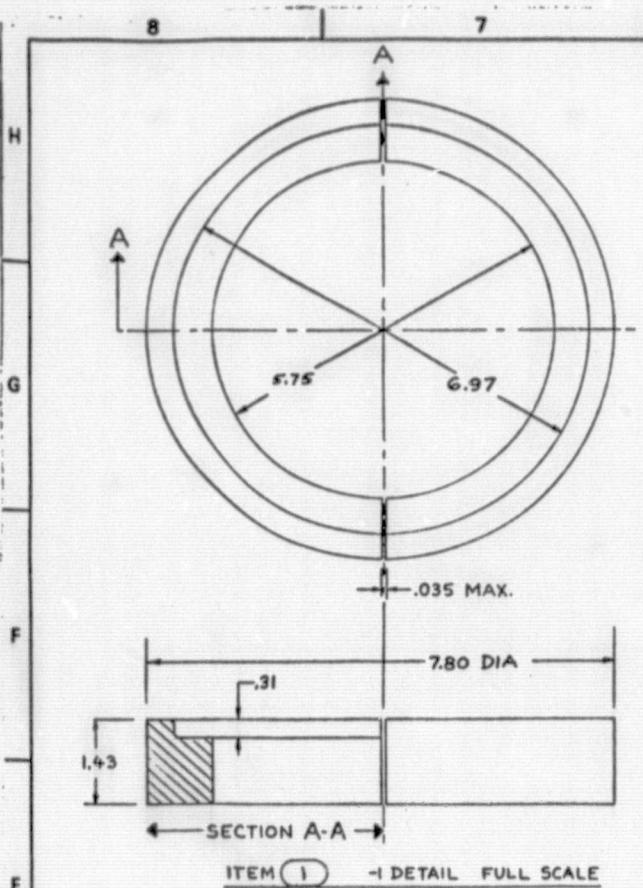
C



B

A

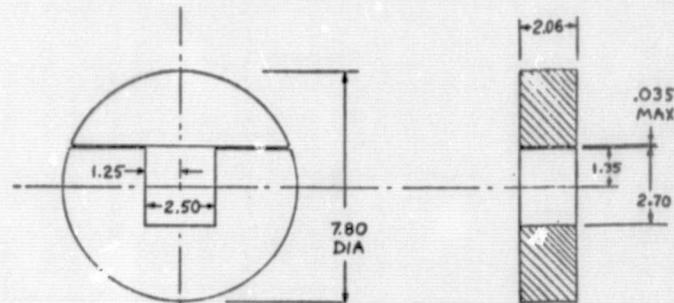
FOLDOUT FRAME B-14



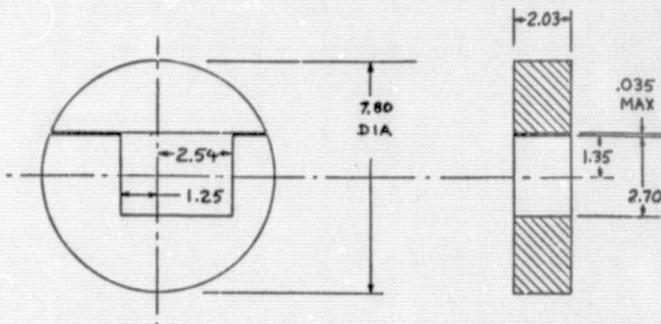
- NOTES
- PARTICLES OF THIS MATERIAL ARE HAZARDOUS TO BREATHING. THEREFORE WHILE MACHINING, FILTER MASK SHOULD BE WORN & DEBRIS SHOULD BE CONTINUOUSLY DRAWN AWAY BY VACUUM.
 - THIS MATERIAL IS ABRASIVE. USE CARBALDY TOOLS OR GRINDING WHEELS.
 - ITEM (3) WITH HOLES, ITEM (7) OMIT HOLES.

ORIGINAL PAGE IS
OF POOR QUALITY

5 4 3 2 1

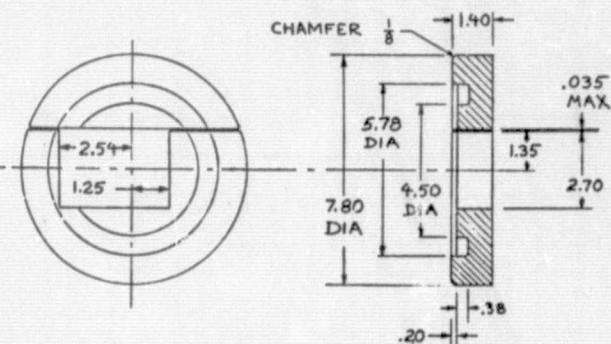


ITEM 4 -7 DETAIL HALF SCALE



ITEM 5 -9 DETAIL HALF SCALE

DETAIL FULL SCALE



ITEM 6 -11 DETAIL HALF SCALE

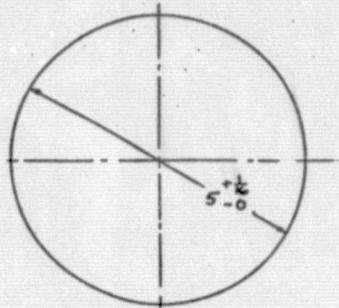
FOLDOUT FRAME 1

QTY	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT. OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO
1		-13				7	
1		-11				6	
1		-9				5	
2		-7				4	
1		-5				3	
1		-3				2	
1		-1	3" THICK SLAB	MIN K 1301 JOHN'S MANVILLE		1	

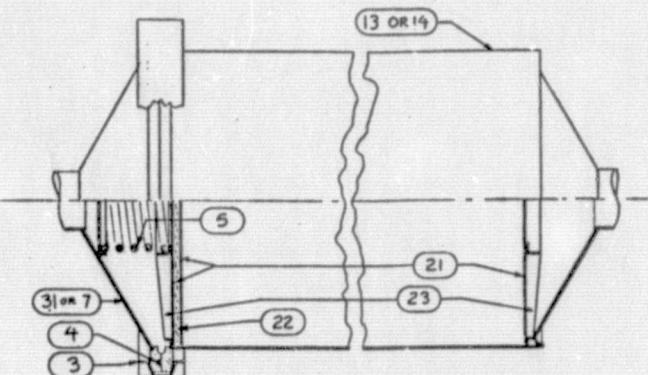
INTERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON FRACTIONS = ± 1/16. DECIMALS: .X = ± .001, .XX = ± .002, .XXX = ± .010 ANGLES = ± 2 DEG	DATE 12-15-72 DWN (JAS) APVD ENGRG CHKR P. MAMIS 2-15-73	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BURLINNVAL, CALIFORNIA
NEXT ASSY USED ON APPLICATION	CONTR CC/A/C/FD	APVD	THERMAL INSULATION IHC CO TCCS
			SHEET 1 OF 1 REV A SCALE 1:1 DRAWING NO CC-110

8 7 6 5 4

H

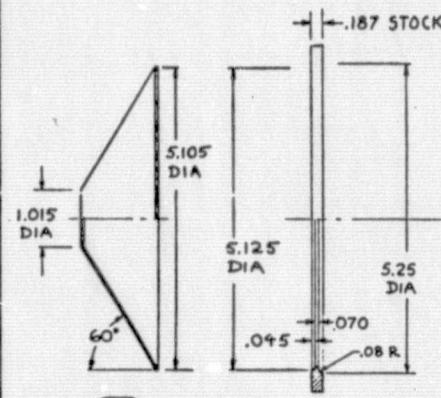


ITEM (22) -43 DETAIL

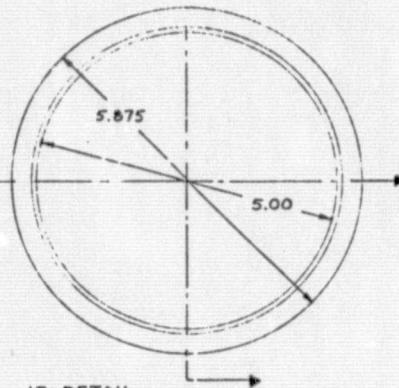


ITEMS (1 & 2) -501 4-503 ASSY'S. [4]

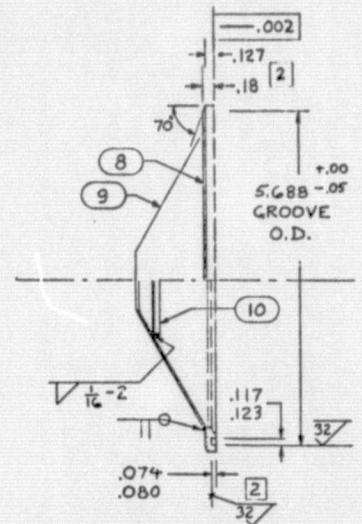
F



ITEM (9) -17 DETAIL



ITEM (8) -15 DETAIL



ITEM (6) -11 DETAIL [2]

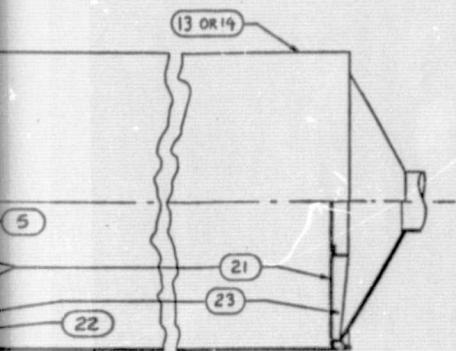
NOTES

- C
1. WELD PER LAC 3853-050200.
2. MACHINE FLANGE AFTER WELDING & WELD INSPECTIONS HAVE BEEN COMPLETED.
3. GRIND OR MACHINE TO PROVIDE I.D. OF 4.970 MIN.
4. SPOTWELD ITEM 21 TO ITEM 23 AT APPROX $\frac{1}{2}$ INCH INTERVALS AROUND CIRCUMFERENCE.
5. CLEAN ALL METAL SUBASSEMBLIES AND PARTS PER LAC 0170 AFTER COMPLETION OF WELD INSPECTION AND OTHER MFG. OPERATIONS.

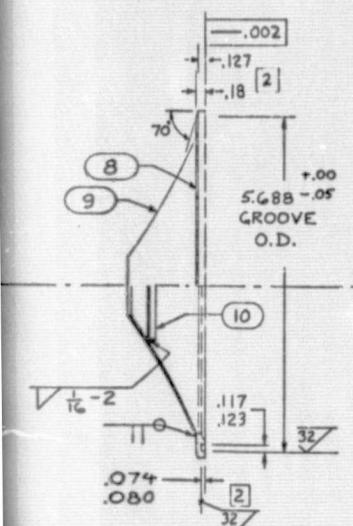
B

A

REVISIONS		DATE	APVD.
ZONE	LTR	DESCRIPTION	
SHEET 2 D4	A	.063 SHEET STOCK WAS .032	5-23-73 (2a)
SHEET 1 E4	B	RELOCATED ITEM 22	7-6-73 (2a)



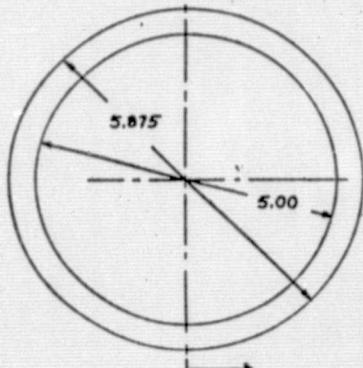
ITEMS 1 & 2, -501 & -503 ASSY'S. [4]



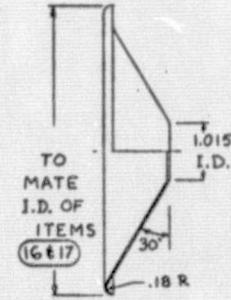
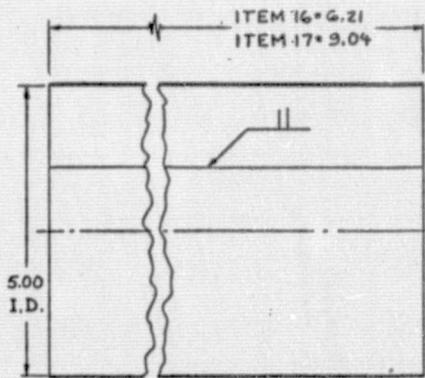
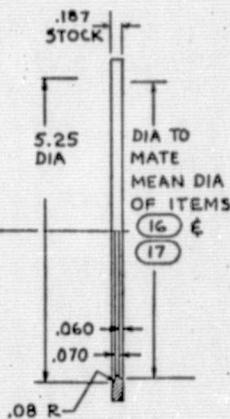
ITEM 6 - II DETAIL 2

QTY	REF'D. FROM SER.	CODE	IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
1	-503	-501		CC-III-501	PRE-SORB.CAN.				1
PARTS LIST									
INTERPRET DWG PER									
UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES.TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XXX = $\pm .010$ ANGLES = ± 2 DEG									
APVD									
ENRG									
CNCR (P.D.F. PAG. 19)									
APVD									
CONTR									
CCA/C1/FD									

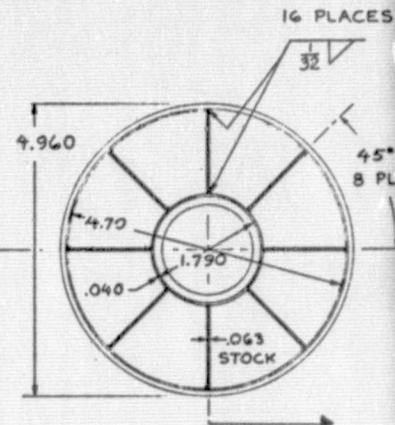
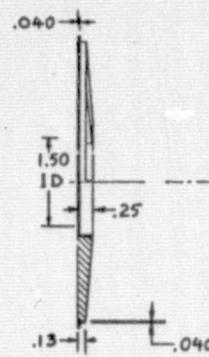
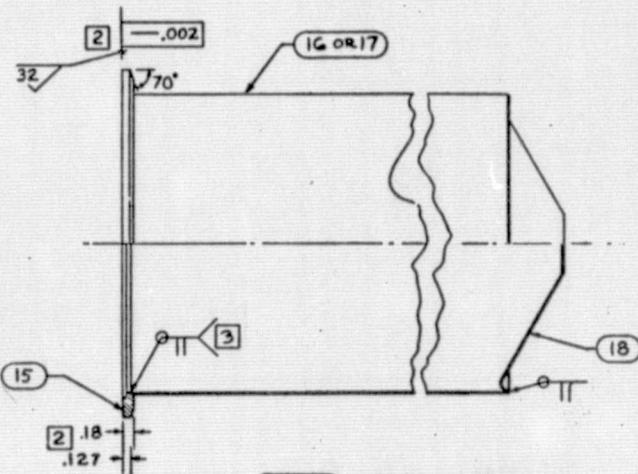
DATE 3-25-73	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
DWY 111			
APVD			
APVD			
ENRG			
CNCR (P.D.F. PAG. 19)			
APVD			
CONTR			
CCA/C1/FD			
SCALE 1:1			
REV B			
DRAWING NO. CC-III			
SHEET 1 OF 3			



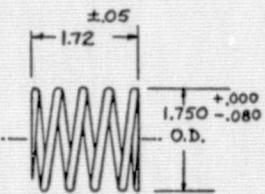
ITEM (15) -29 DETAIL



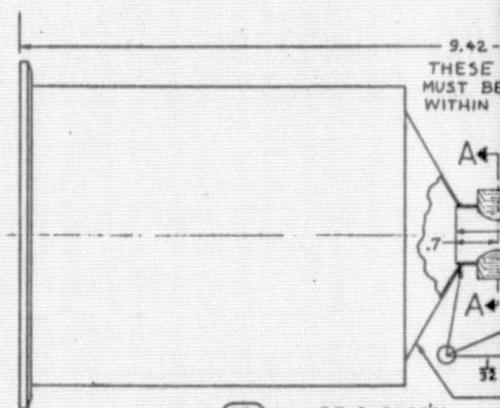
ITEM (18) -35 DETAIL



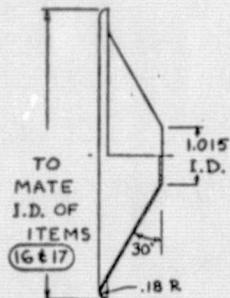
ITEM (23) -45 DETAIL



HELIX : RT. OR LEFT HAND
ENDS : SQUARED, GROUND
FREE TURNS : 4
WIRE : TYPE 302 CRES, .125^{+.001} DIA
SPRING TEMPER
ITEM (5) DETAIL - 9



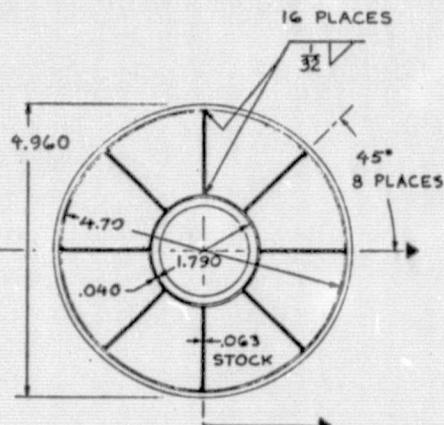
ITEM 16 = G.21
ITEM 17 = 9.04



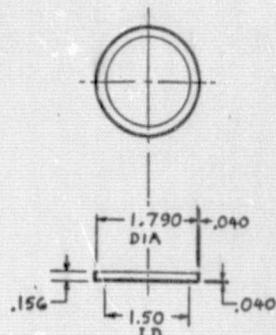
ITEM 21 -41 DETAIL

31 E-33 DETAILS

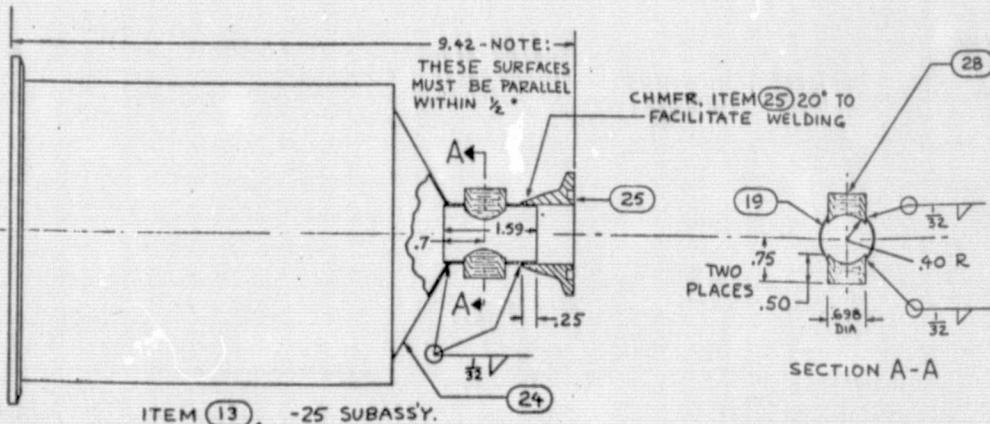
ITEM 1B



ITEM 10 - 19 DETAIL

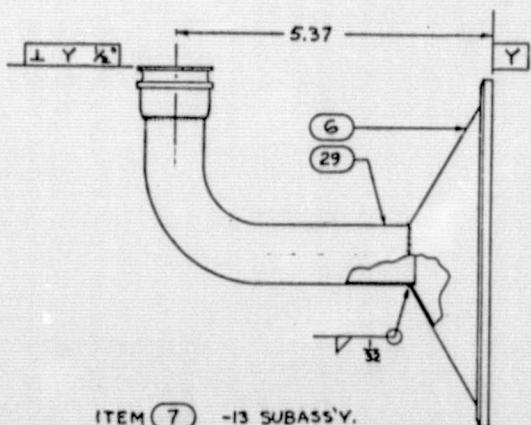
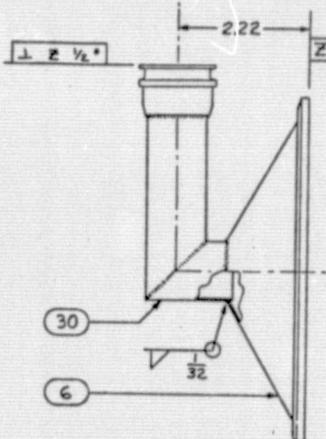
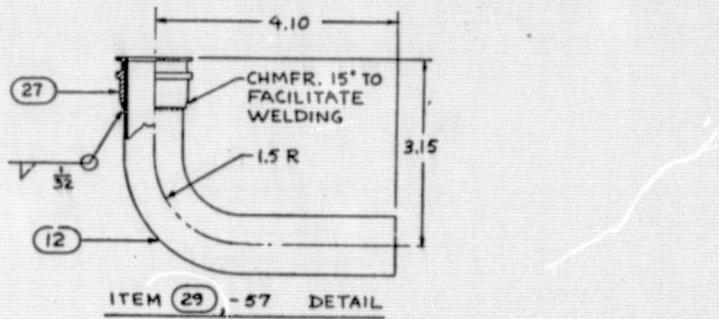
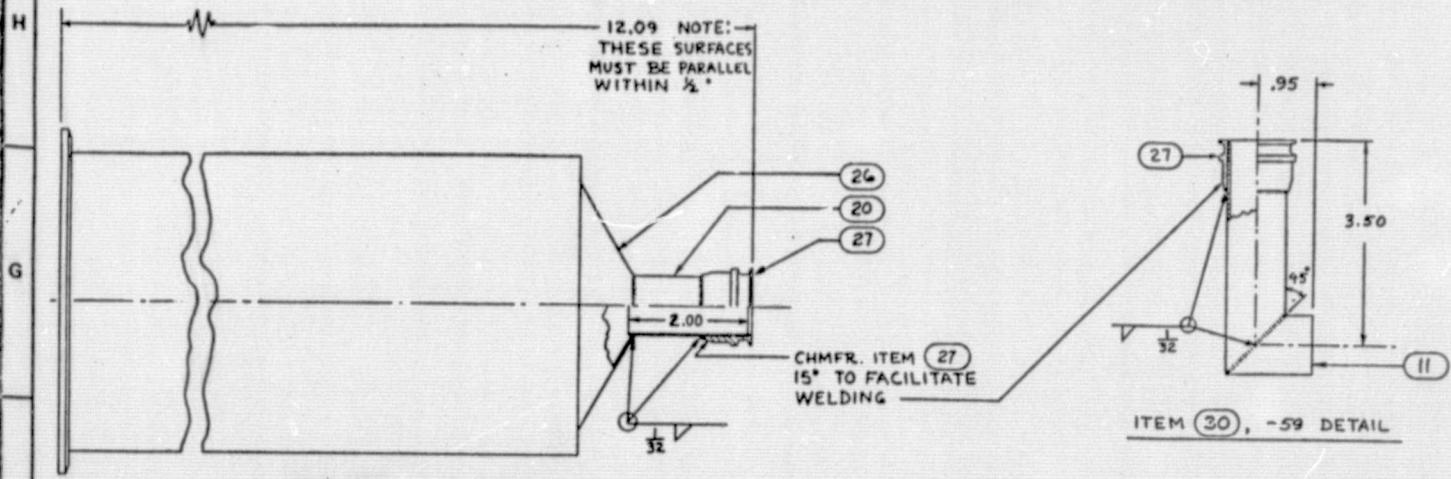


ITEM 23 -45 DETAIL

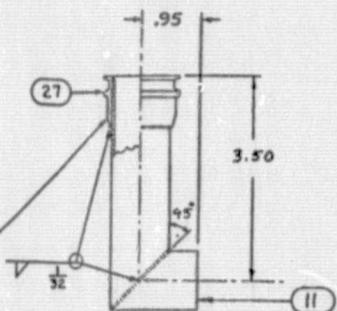


FOLDOUT FRAME

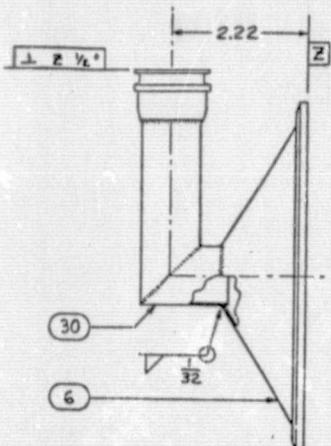
CITY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO	
								PARTS LIST
INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS : $X = \pm .1$ $X = \pm .03$ $XXX = \pm .010$ ANGLES = ± 2 DEG		DATE 1-18-73	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
		DWV		APVD				
				APVD				
				ENGRO				
				CHKR <i>B. M. 1/18-73</i>				
				APVD				
NEXT ASSY	USED ON APPLICATION	CONTR			SIZE	CODE IDENT	DRAWING NO	REV
		APVD			E	-CC-111	-B	
					SCALE: F.V.L.		SHEET 2 OF 3	



ORIGINAL PAGE IS
OF POOR QUALITY



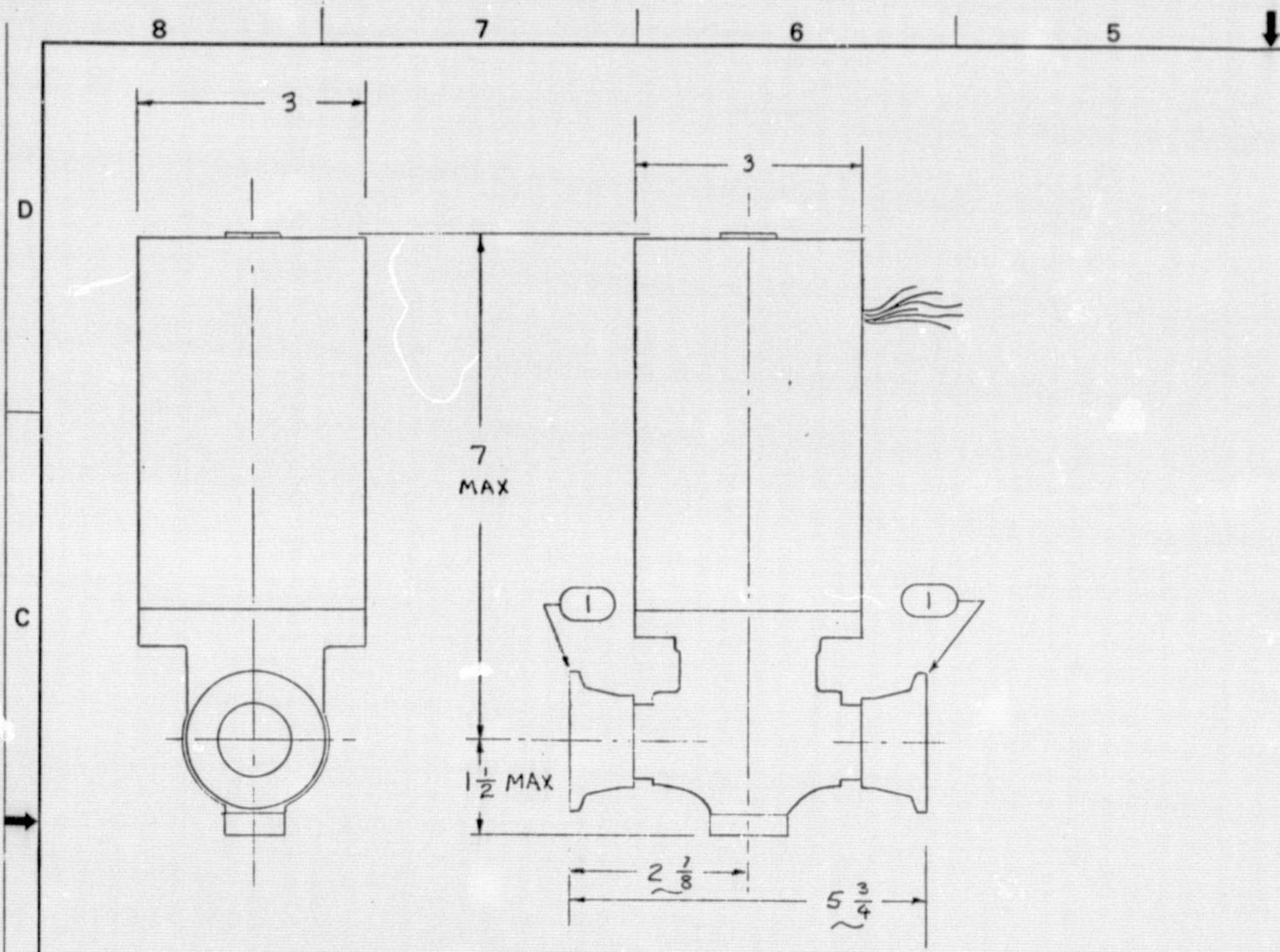
ITEM (30), -59 DETAIL



ITEM 31, -61 SUBASS'Y.

FOLDOUT FRAME

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO
						PARTS	LIST
INTERPRET DWG PER							
UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON:			DATE 7-2-73	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BUNNYMEALE, CALIFORNIA			
FRACTIONS = $\pm 1/16$			DWYM 113				
DECIMALS: .X = $\pm .1$			APVD				
.XX = $\pm .03$			APVD				
.XXX = $\pm .010$			ENRG				
ANGLES = ± 2 DEG			CHER 2-6 Rev 1 8-29-77				
			APVD				
NEXT ASSY	USED ON	CONTR		SIZE	CODE IDENT	DRAWING NO	REV
		APPLICATION	APVD	E		CC - 111	B
				SCALE: Full	SHEET 3 OF 3		



REQUIREMENTS

- B 1. WHEN CLOSED, (ENERGIZED) MUST BE VACUUM TIGHT TO .000001 TORR ON LOW PRES. SIDE.
2. EQUIP WITH POSITION INDICATOR SWITCH TO SIGNAL WHETHER VALVE IS SEADED OR OPEN.
3. POWER: 100 TO 104 VOLTS, DIRECT CURRENT.
4. FLUID : AIR , TEMP 290°F MAX.
5. AMBIENT TEMP: 125°F MAX.
6. VALVE BODY MAT'L. : ALUMINIUM.
7. DIFFERENTIAL PRESSURE WHEN VALVE IS CLOSED: 10 P.S.I. IN ONE DIRECTION,
15 P.S.I. IN OTHER DIRECTION.
8. ELECTRIC LEAD WIRES TO BE TEFLOK OR KAPTON INSULATED, EACH 3 FT. LONG :
2 COIL LEADS, 1 GROUND TO VALVE FRAME OR BODY, 3 SWITCH LEADS.
9. DESIGN FOR CONTINUOUS DUTY(ENERGIZED).
10. Cv = 12 MINIMUM.
11. VALVE MUST OPERATE IN ALL ORIENTATIONS.

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE
-----------------------------	------------------------------

REVISIONS		DATE	APPD
ZONE LTR	DESCRIPTION		
A	ADDED: REQ'T II. 7" MAX WAS $\frac{3}{4}$, $\frac{1}{2}$ " 6 $\frac{1}{16}$. 1 $\frac{1}{2}$ " MAX WAS $1\frac{1}{4}$. 5 $\frac{3}{4}$ " WAS $4\frac{3}{4}$. 2 $\frac{7}{8}$ " WAS $2\frac{7}{8}$. SCALE "NONE" WAS "FULL" NOTE 3 WAS 100 V.D.C.		an

D

C

B

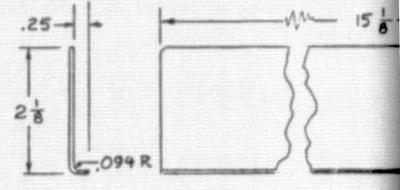
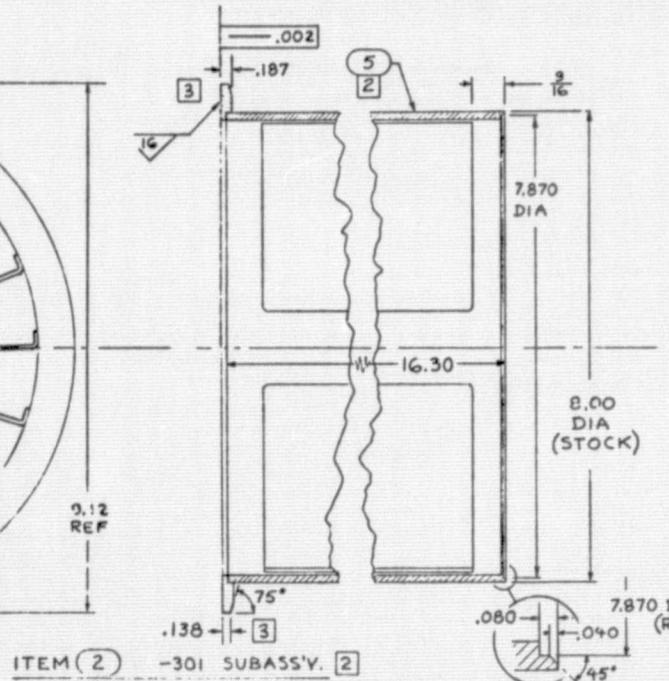
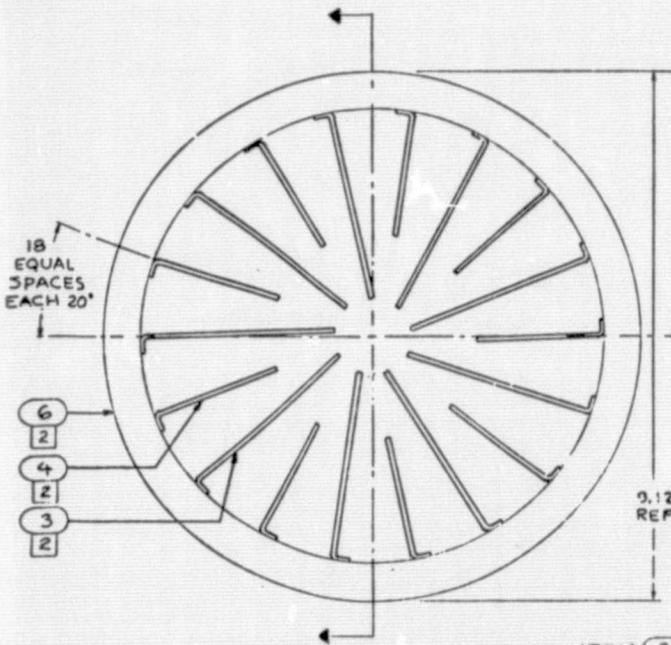
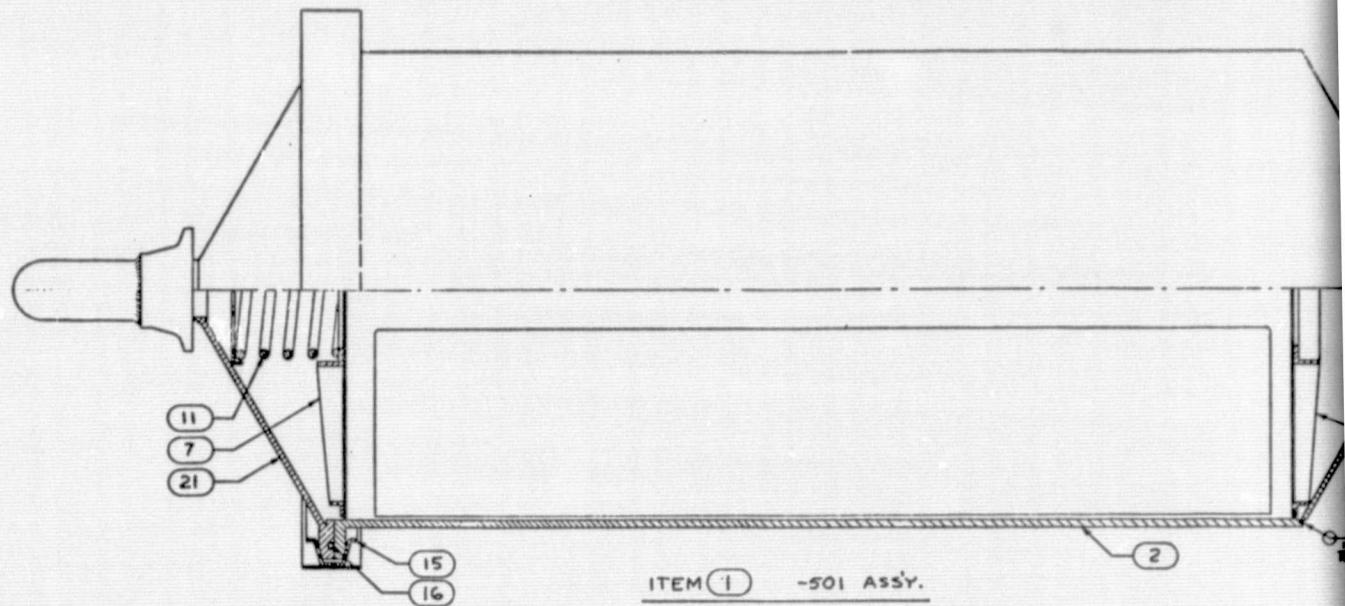
2		MFM5702A100	AEROQUIP - MARMAN	FLANGE FOR 1 IN. DIA. TUBING	6061 T6		(1)
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.

PARTS LIST

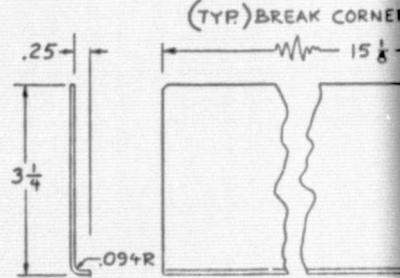
INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 2-9-73 DR (W) APPD APPD ENRG CHK APPD CONTR APPD	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA
NEXT ASSY	USED ON			SOLENOID VALVE - TCCS (NORMALLY OPEN, 2 WAY) DESIGN CONTROL DRWG.
APPLICATION	CCA/CEI	D	REV CC-112 A	
		SCALE : NONE	SHEET 1 OF 1	

B-19

FOLDOUT FRAME 2



ITEM 4 -3 DETAIL

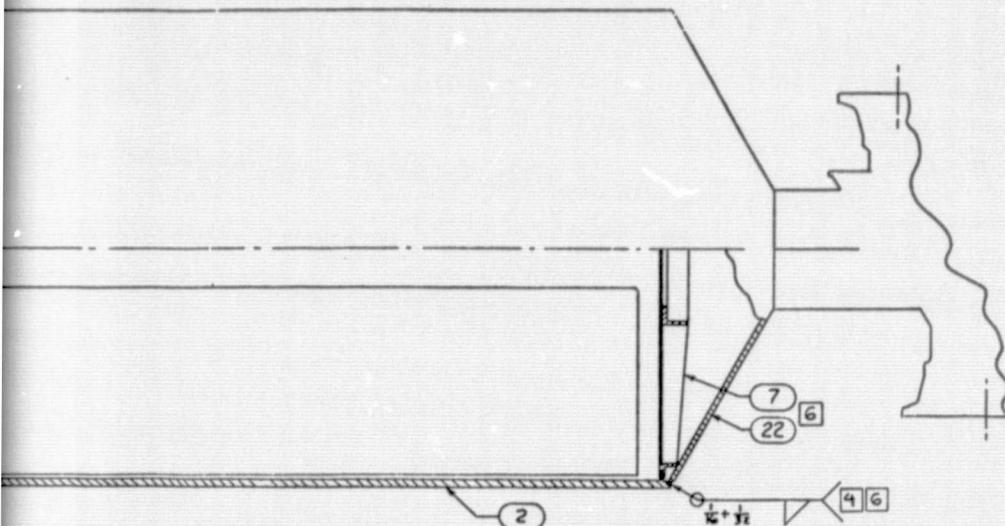


ITEM 3 -1 DETAIL

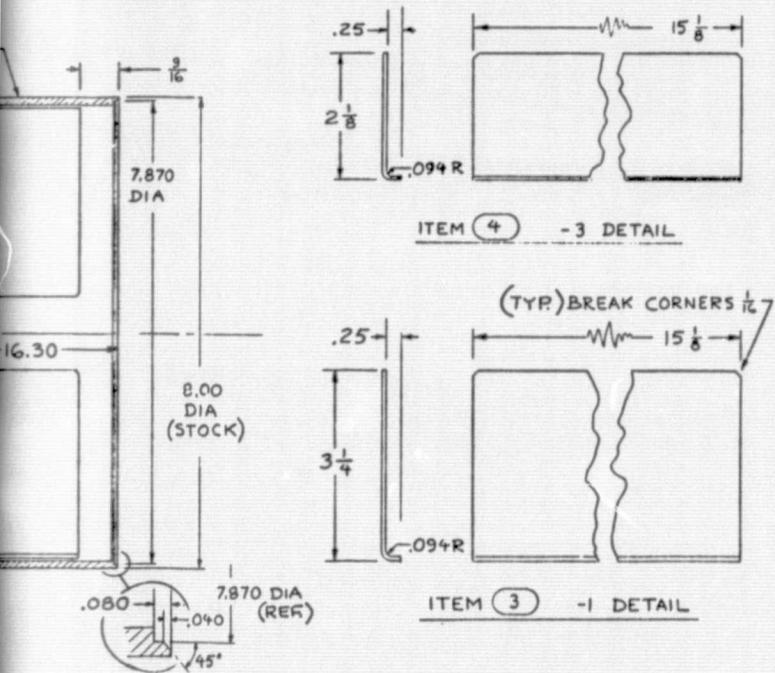
NOTES

- 1 SELECT PREMIUM TUBING FOR BEST ROUNDNESS AVAILABLE (ITEM 5)..
- 2 DIP BRAZE ITEMS 3,4 & 6 TO ITEM 5 USING ALLOY HAVING MELTING POINT ABOVE 700°F. DO NOT HEAT TREAT AFTER BRAZING. FINS (ITEMS 3 & 4) ARE TO HAVE CONTINUOUS METAL CONTACT WITH CYLINDER (ITEM 5) OVER THEIR ENTIRE LENGTH. FLANGE BRAZE MUST BE VACUUM TIGHT.
- 3 MACHINE FLANGE AFTER DIP BRAZING. MACHINE FACE OF FLANGE FIRST, AND .138 X 75° ON BACKSIDE LAST.
- 4 WELD PER LAC 3853-050200, VACUUM TIGHT.
- 5 SPOTWELD ITEM 8 TO ITEM 9 AROUND CIRCUMFERENCES AT INTERVALS OF 3/4 IN. OR LESS. THEN ANODIZE PER LAC 0494 TYPE I.
- 6 ITEM 7 MUST BE IN PLACE BEFORE ITEM 22 IS WELDED TO ITEM 2.
- 7 ANODIZE PER LAC 0494 TYPE I. THEN GRIND OFF ANODIZE LOCALLY FROM ITEM (10) TO ENABLE WELDING IT TO ITEM (13) AT 3 OR 4 PLACES.
- 8 MACHINE FLANGE AFTER WELDING.

ORIGINAL PAGE IS
OF POOR QUALITY



ITEM 1 -501 ASSY.



ITEM 4 - 3 DETAIL

ITEM 3 -1 DETAIL

RE ITEM 22

WHEN GRIND
EM (10) TO
13 AT 3

NG.

QTY PER	QTY PER	CODE REFD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO
1				AL SHEET	.080 THICK G061 T G	QQ-AZ50//			30
1				AL TUBING 1 IN. O.D.X.049 W	G061	WWT 700/G			29
									28
									27
1				AL TUBING 2 IN. O.D X.065 W	G061 T G	WWT 700/G			26
1				NPT BOSS	.625 DIA ROD	G061 T G E			25
2				MS BOSS	.625 DIA ROD	G061 TG51			24
1				GROOVED TUBE FLANGE TEE END SUBASSY.	AEROQUIP-MARSHAN MFM 5703-A-200 SEE DRWG.	G061			23
			-305						22
			-303	FLANGED END SUBASSY.	ITEMS 17,20				21
			-35	BUTT TUBE E MARSHAN FLNG.	ITEMS 18,19				20
1				GROOVED TUBE FLANGE	AEROQUIP-MARSHAN MFM 5703-A-100	G061			19
1				AL TUBING 1 IN.O.D.X.049 W	G061	WWT 700/G			18
1			-29	SUBASSY.	ITEMS 10,12,13				17
				O RING	PARKO PRP- 568-268	LW COMPRESER VITON 9003-75			16
				MARSHAN CLAMP	MV 88168 K5- 925 T	CRES			15
1			-23	CONE	ALUM G061 .080 SHEET				14
1			-21	CONG	ALUM G061 .080 SHEET				13
1			-19	FLANGE	ALUM G061 T .512 PLATE				12
1			-17	SPRING	SEE DRWG.				11
1			-15	RING	ALUM G061 TG				10
2			-13	RETAINER SPIDER	ALUM G061				9
2			-11	SCREEN	CAMBRIDGE WIRE CLOTH CO., MARYLAND	ALUM 18 MESH .018 WIRE DIA			8
2			-9	RETAINER SUBASSY.	ITEMS 8&9				7
1			-7	FLANGE	G061 T G ALUM .250 MIL. I.D.				6
1				CYLINDER	TURB SALS	G061TG51// SEE NOTE 1			5
9			-3	SHORT FIN	.062 SHEET G061 T-G ALUM				4
9			-1	LONG FIN	.062 SHEET G061 T-G ALUM				3
			-301	CYL. SUBASSY.					2
			CC-113-501	REGEN. BED					1

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES.TOLERANCES ON:	DATE 3-23-73	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
		FRACTIONS = $\pm 1/16$ DECIMALS = . $\pm .00$.X $\pm .00$.XX $\pm .00$.XXX $\pm .000$	APVD	REGENERABLE BED CANISTER		
		ANGLES = ± 2 DEG	APVD	TCCS		
NEXT ASSY	USED ON	CONTR	APVD	SIZE E	CODE IDENT CC-113	DRAWING NO -
APPLICATION	CCA/CI/FD	APVD	SCALE FULL OR NOTED	REV -		SHEET 1 OF 3

8

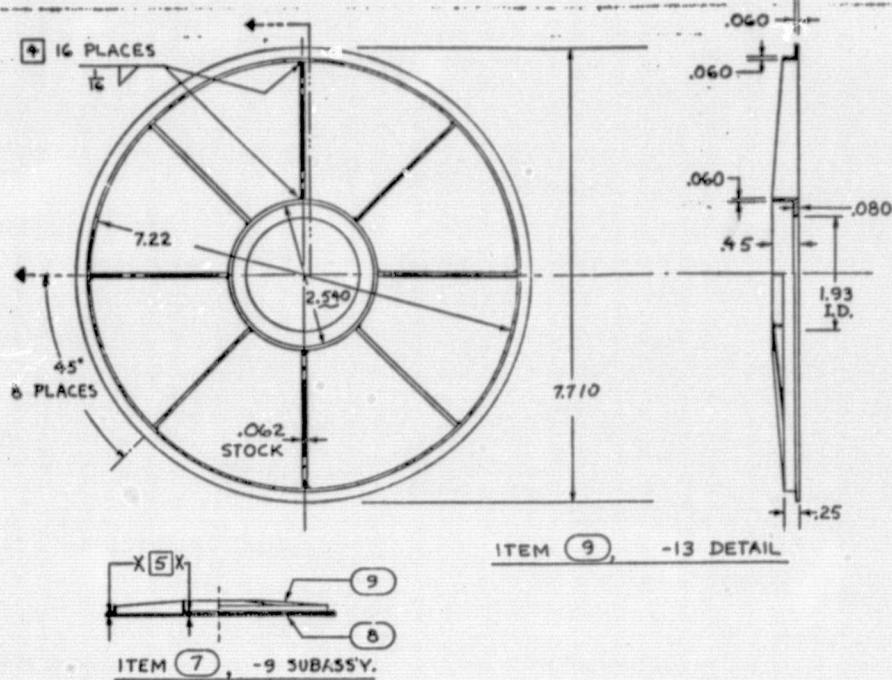
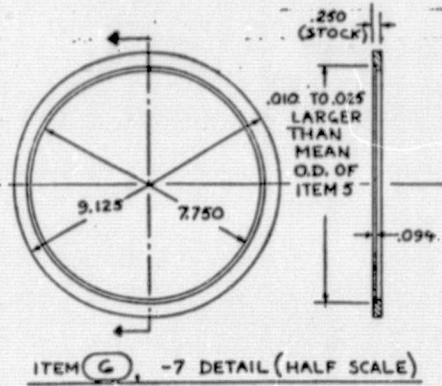
7

6

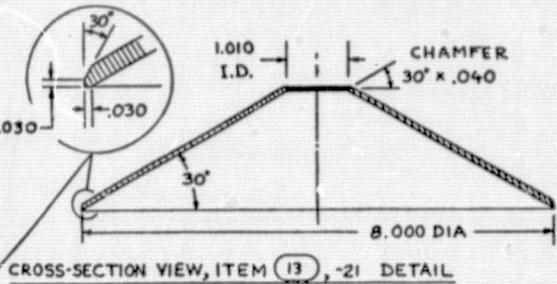
5

4

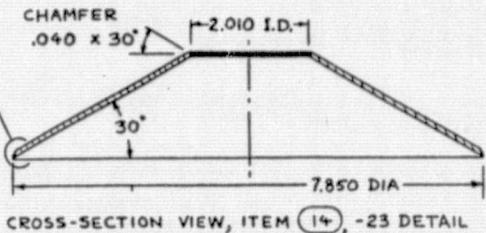
G



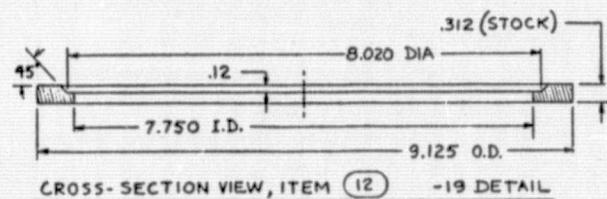
F



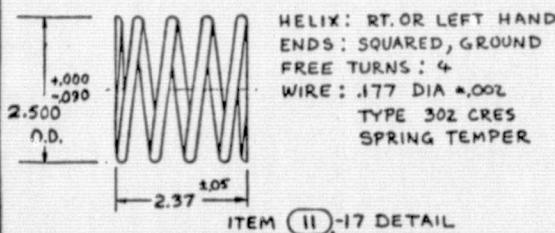
E



D

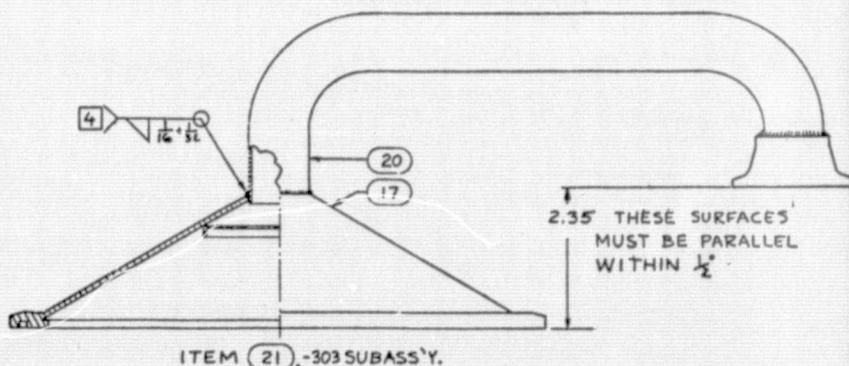
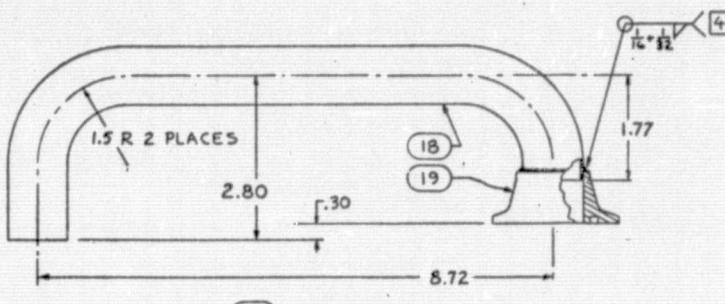


C

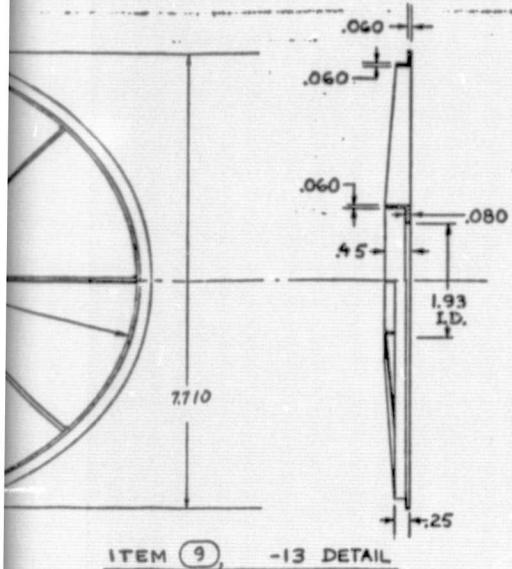


B

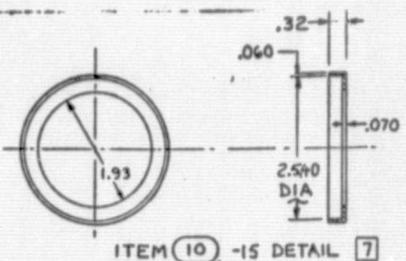
A



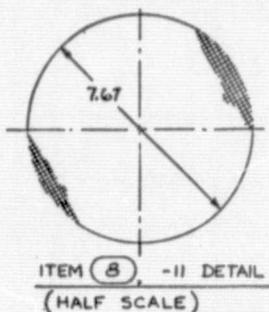
ORIGINAL PAGE IS
OF POOR QUALITY



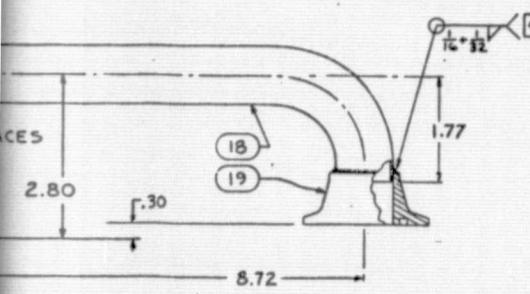
ITEM 9 -13 DETAIL



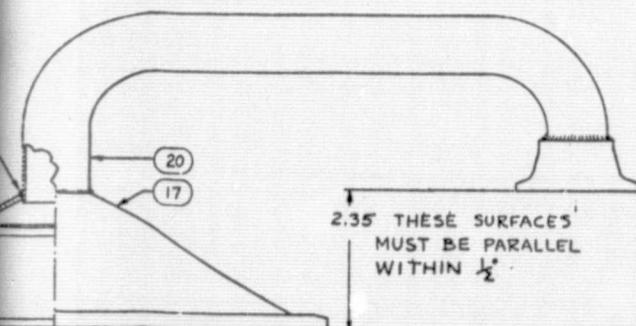
ITEM 10 -15 DETAIL 7



ITEM (8), -II DETAIL
(HALF SCALE)

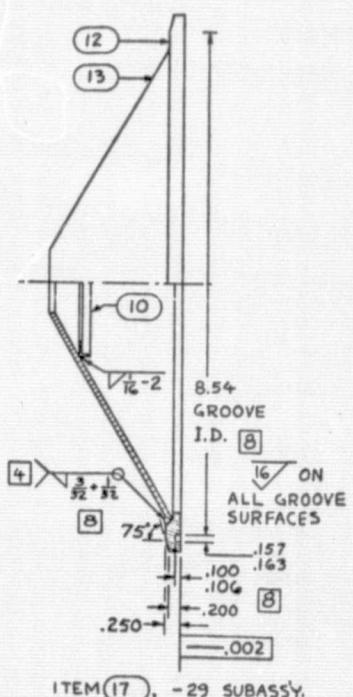


M 20, -35 DETAIL



2.35 THESE SURFACES
MUST BE PARALLEL
WITHIN \pm

21 -303 SUBASS'Y

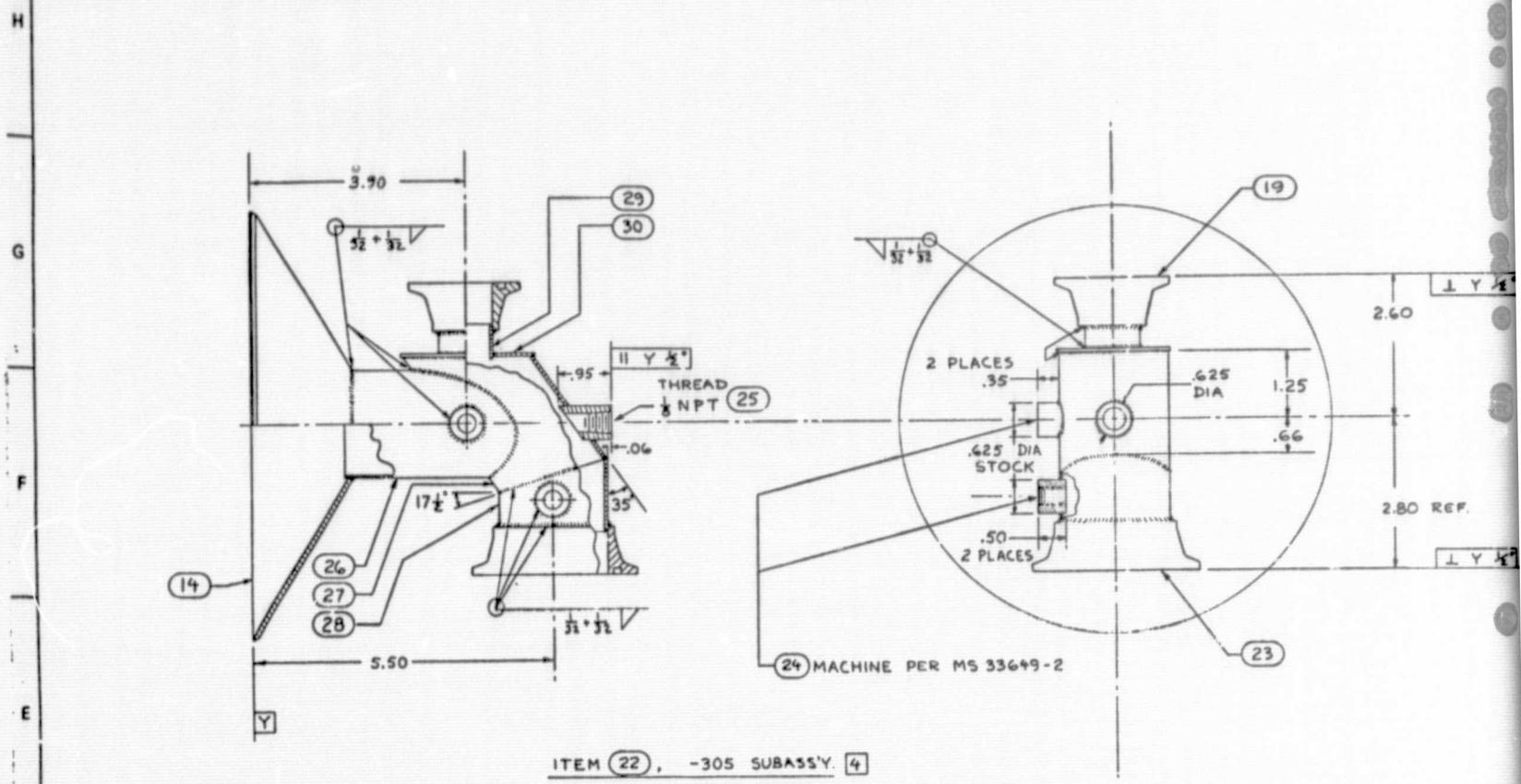


ITEM 17, -29 SUBASSY.

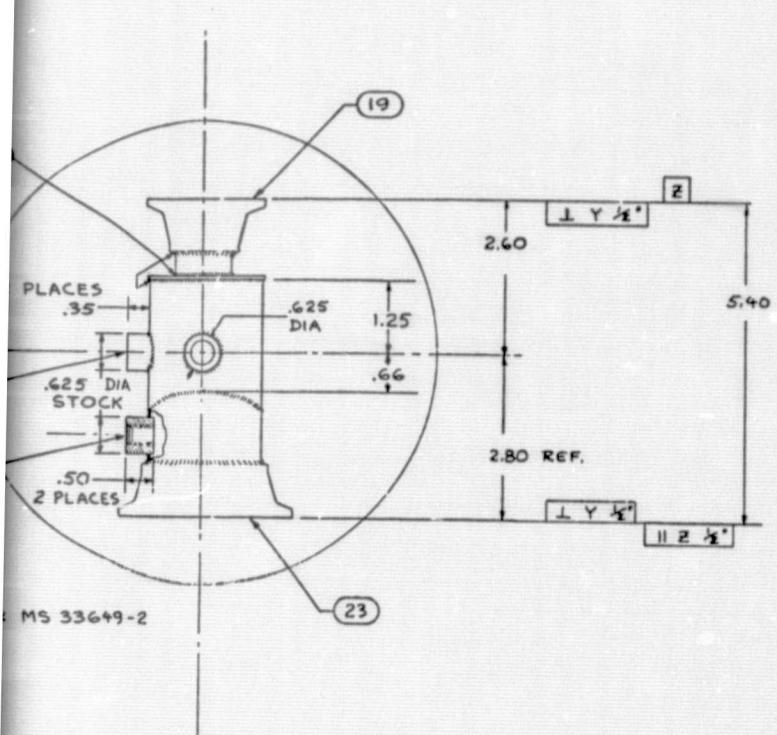
FOLDOUT FRAME

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO
PARTS LIST							
INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON:	DATE 3-23-73 DWG. 001	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BUNNYMEALE, CALIFORNIA			
		FRACTIONS = $\pm 1/16$ DECIMALS = .X = $\pm .5$.XX = $\pm .03$.XXX = $\pm .010$	APVD	REGENERABLE BED CANISTER			
		ANGLES ± 2 DEG	APVD				
NEXT ASSY USED ON APPLICATION		CONTR. CCA/C1/FD	APVD	SIZE E	CODE IDENT CC-113	DRAWING NO.	REV -
				SCALE 1"=1'	OR, NOTED	SHEET 2 OF 3	

8 7 6 5 4



ORIGINAL PAGE IS
OF POOR QUALITY



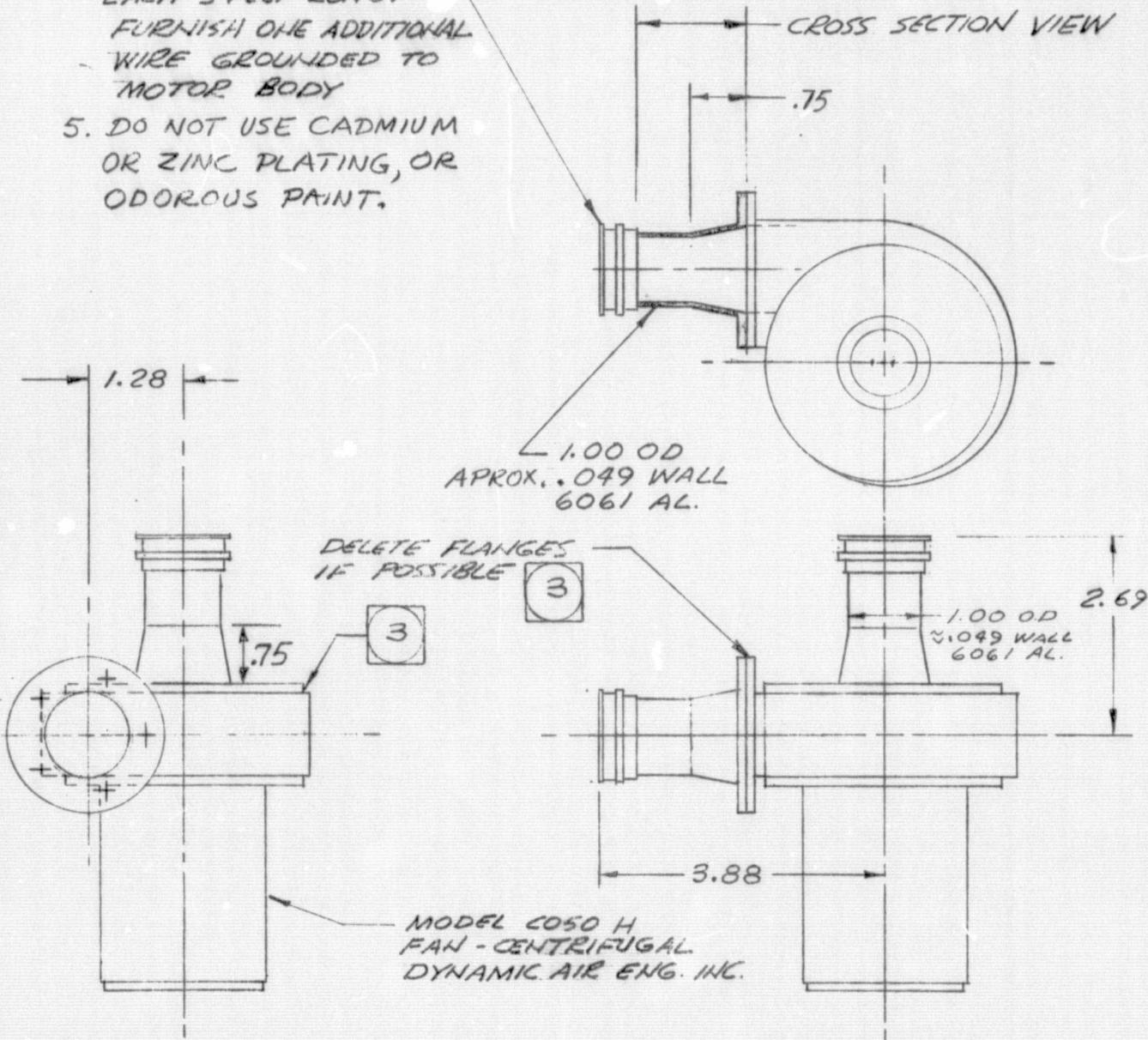
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO	
PARTS LIST								
INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON:	DATE 3-23-73 DWG 2643	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA				
		FRACTIONS: $\pm 1/16$	APVD					
		DECIMALS: $\pm .001$	APVD					
		$\pm .000$	ENRG					
		$\pm .010$	CHKR / B-String 3-23-73					
		ANGLES: ± 2 DEG	APVD					
NEXT ASSY		USED ON	CONTR.	SIZE	CODE IDENT	DRAWING NO	REV	
		APPLICATION	APVD	E		CC-113		
				SCALE 1:1			SHEET 3 OF 3	

NOTES

1. LOCKHEED WILL FURNISH THE GAMAH FLANGES TO DYNAMIC AIR ENG. INC.
2. PERFORMANCE SPECS. TO BE SPECIFIED ELSEWHERE
3. JOINTS TO BE SEALED USING GASKET OR OTHER MEANS

4. ELECTRIC LEAD WIRES TO BE TEFLOK OR KAPTON INSULATED, EACH 3 FEET LONG.
FURNISH ONE ADDITIONAL WIRE GROUNDED TO MOTOR BODY
5. DO NOT USE CADMIUM OR ZINC PLATING, OR ODOROUS PAINT.

F 20210A OR F1185-100 BX FLANGE
GAMAH - DIV. OF STANLEY AVIATION
DENVER COLO - TYP 2 PLACES



REGENERABLE BED BLOWER

CC-114-B REV. 4-11-73 AW
SCALE 1/2 3-19-73 R.B.M

LMSC - SUNNYVALE, CALIF.

DYNAMIC AIR ENG.,
INC. VANE AXIAL
FAN M3192 A-1A

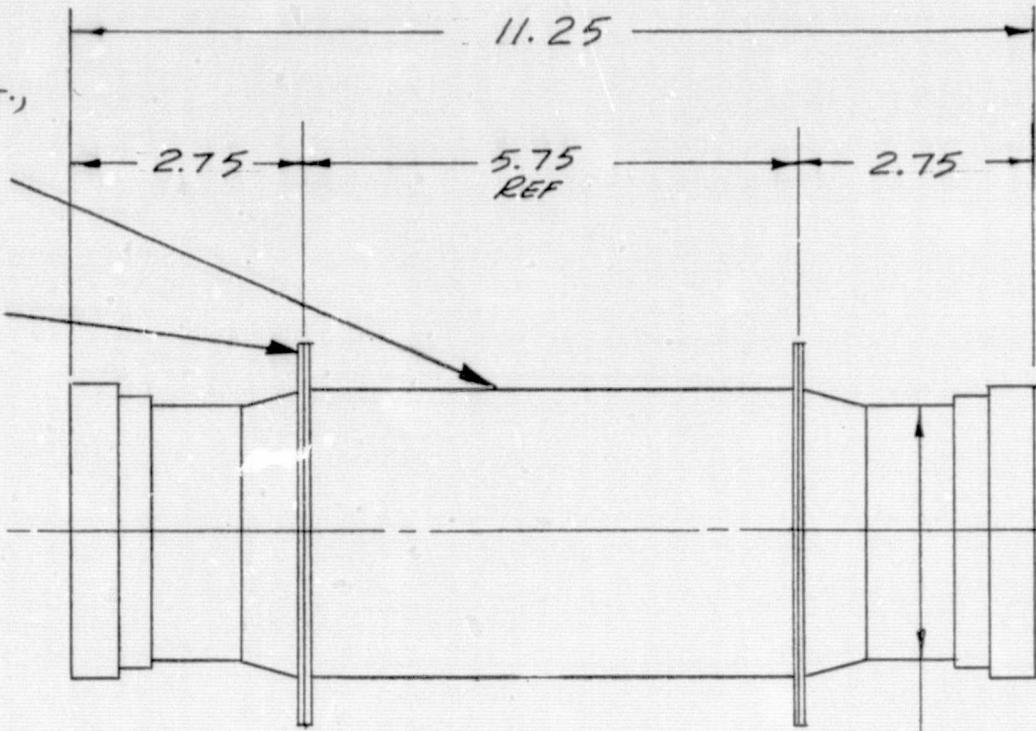
OMIT FLANGES
IF POSSIBLE

(3)

11.25

5.75
REF

2.75



3.00 O.D.
.049 WA
6061 AL
2 PLACE

5. DO NOT USE CADMIUM OR ZINC PLATING, OR
ODOROUS PAINT.

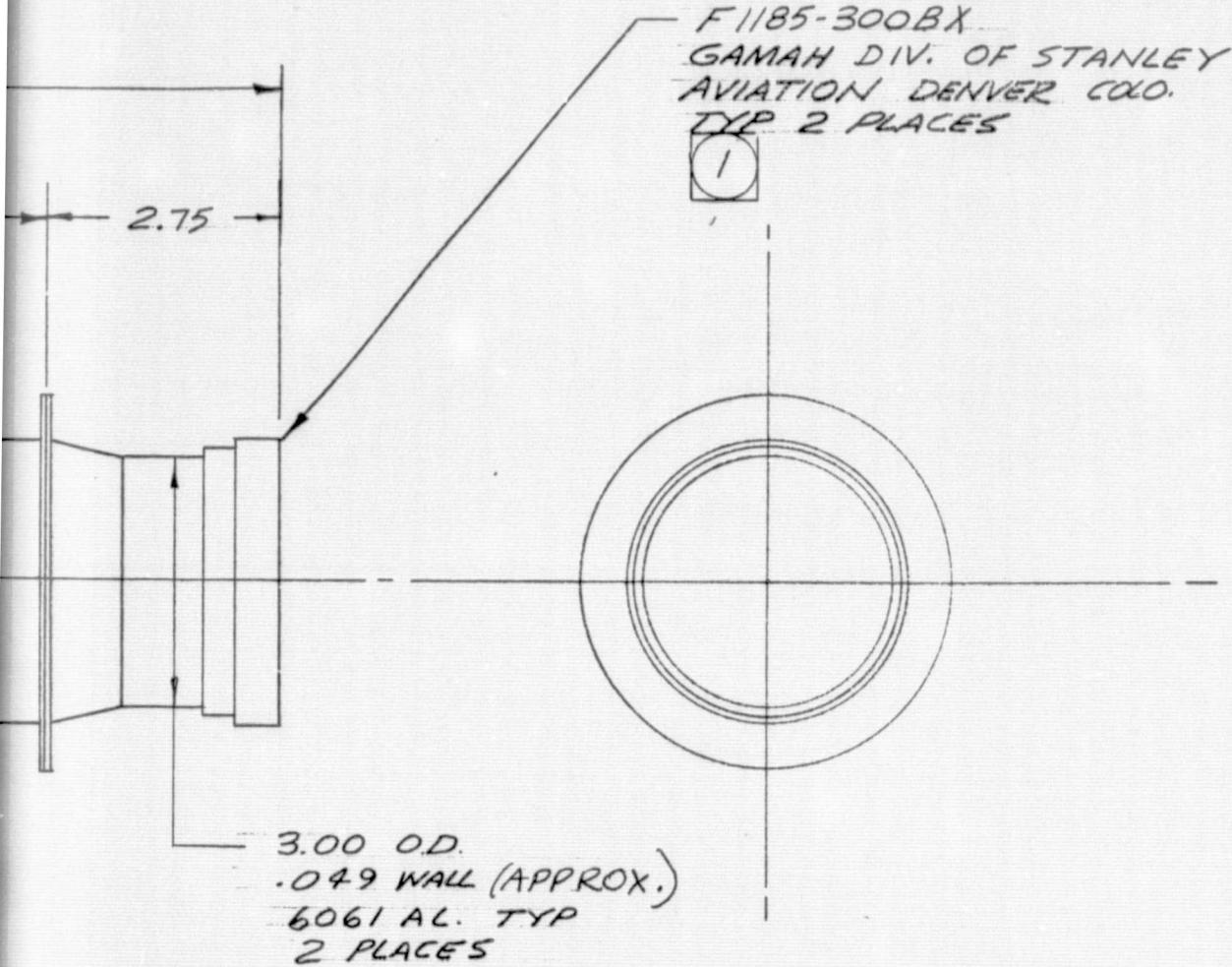
4. ELECTRIC LEAD WIRES TO BE TEFLON OR KAPTON
INSULATED.
FURNISH ONE
ADDITIONAL WIRE GROUNDED TO MOTOR BODY.

(3) JOINTS TO BE SEALED USING GASKET OR OTHER MEANS

2. PERFORMANCE SPECS. TO BE SPECIFIED ELSEWHERE

(1) LOCKHEED WILL FURNISH THE GAMAH FLANGES
TO DYNAMIC AIR ENG. INC.

NOTES



, OR

KAPTON
ONE
BODY.

OTHER MEANS

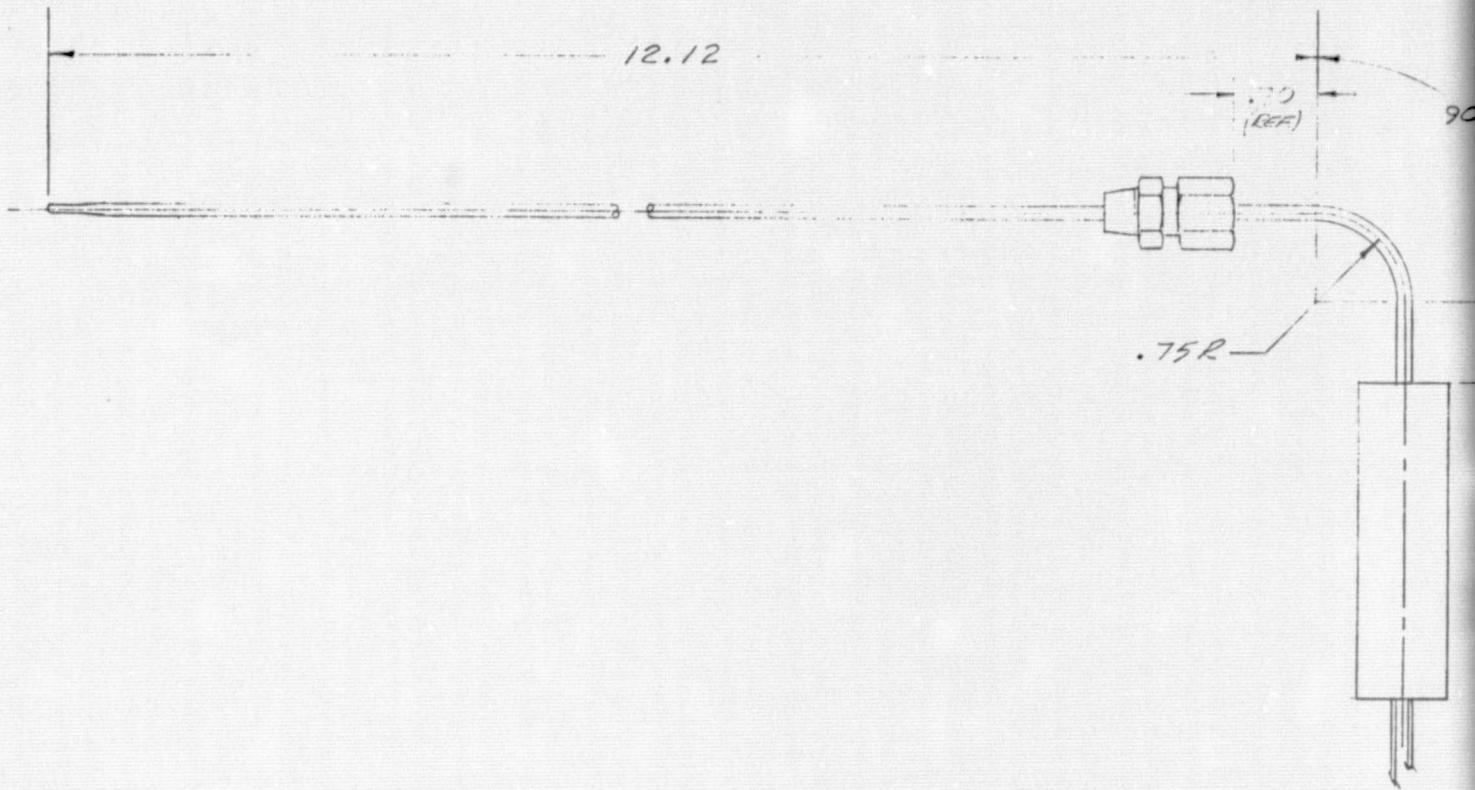
ELSEWHERE

ANGLES

FIXED BED FAN
CC-115-A REV. 3-27-73 aw
 LMSC SUNNYVALE, CALIF
 SCALE $\frac{1}{2}$ 3-14-73 RBM

LIMITED CALENDAR LIFE | LIMITED OPERATING LIFE

D



C



B

A

(1) PURCHASE FROM CONAX - SUBSIDIARY OF
ESTERLINE CORP. BUFFALO, N.Y.
LOCAL REP. INSTRUMENT LABORATORY
644 EMERSON ST. PALO ALTO, CALIF.
94303 PHONE 415.528-1040

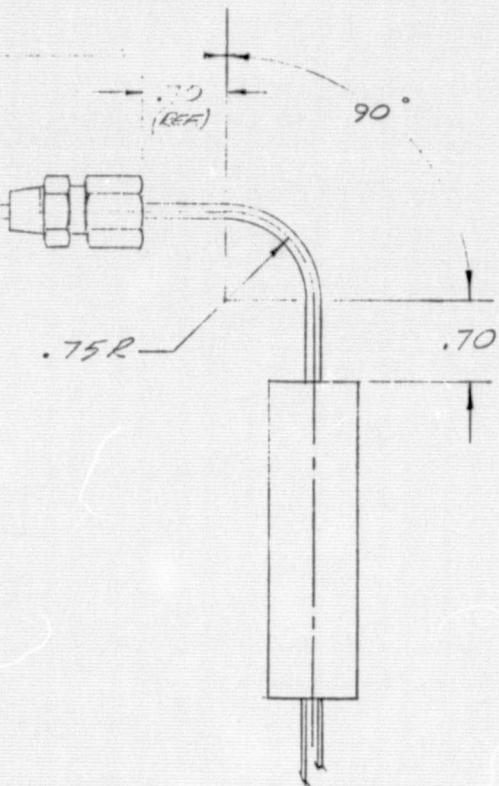
NOTES:

(1)	1	K-5512-U2-QDHT-MPG-12
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON:
		FRACTIONS = $\pm 1/16$
		DECIMALS: .X = $\pm .1$
		.XX = $\pm .03$
		.XXX = $\pm .010$
		ANGLES = ± 2 DEG
NEXT ASSY		CONTR
USED ON		
APPLICATION		CCA/CEI

LIMITED
CALENDAR
LIFE | LIMITED
OPERATING
LIFE

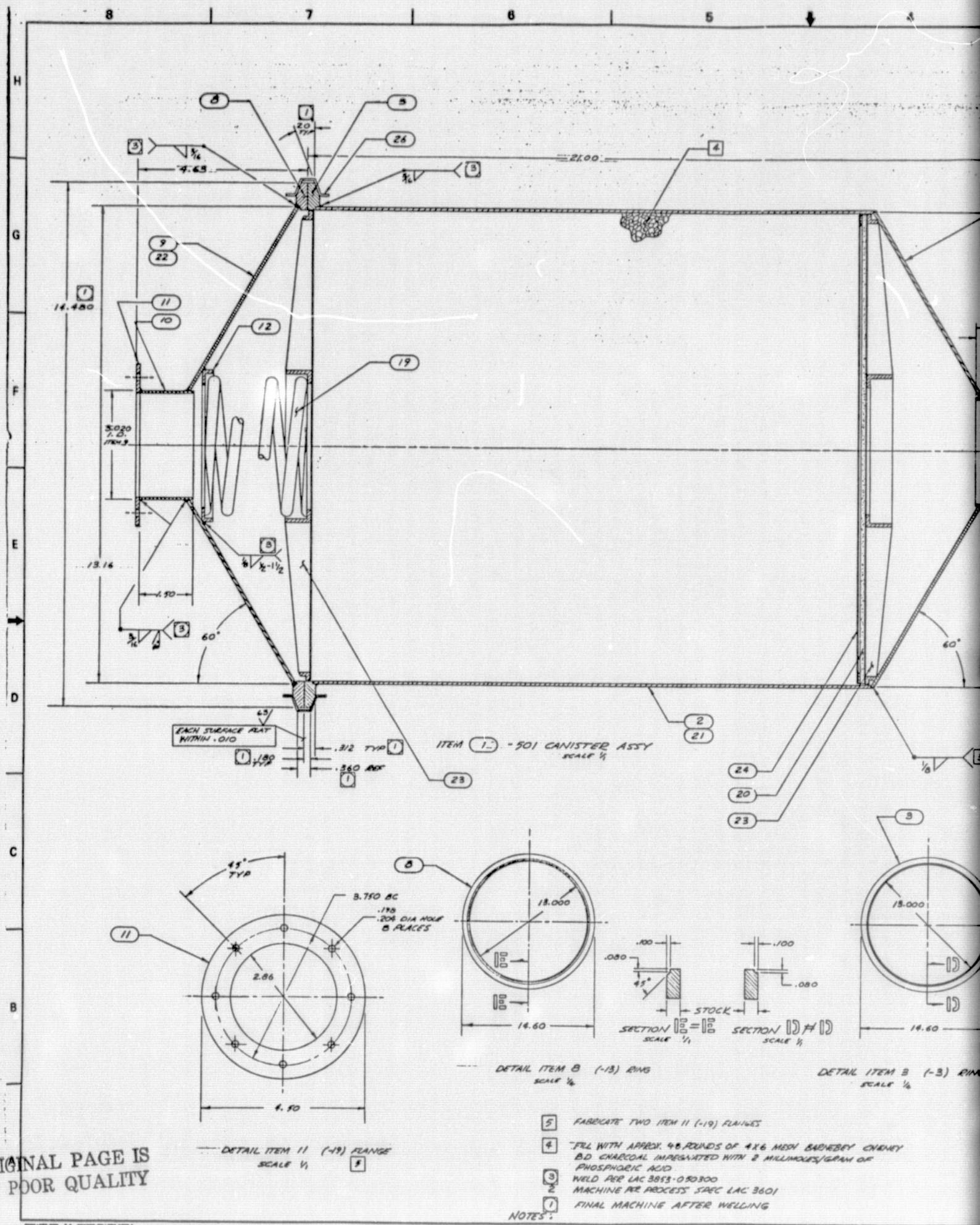
		REVISIONS		DATE	APPD
ZONE	LTR	DESCRIPTION			



(1)	1	K-5512-UR-QDHT-MPG-125-A-T-17 THERMOCOUPLE ASSY					
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.

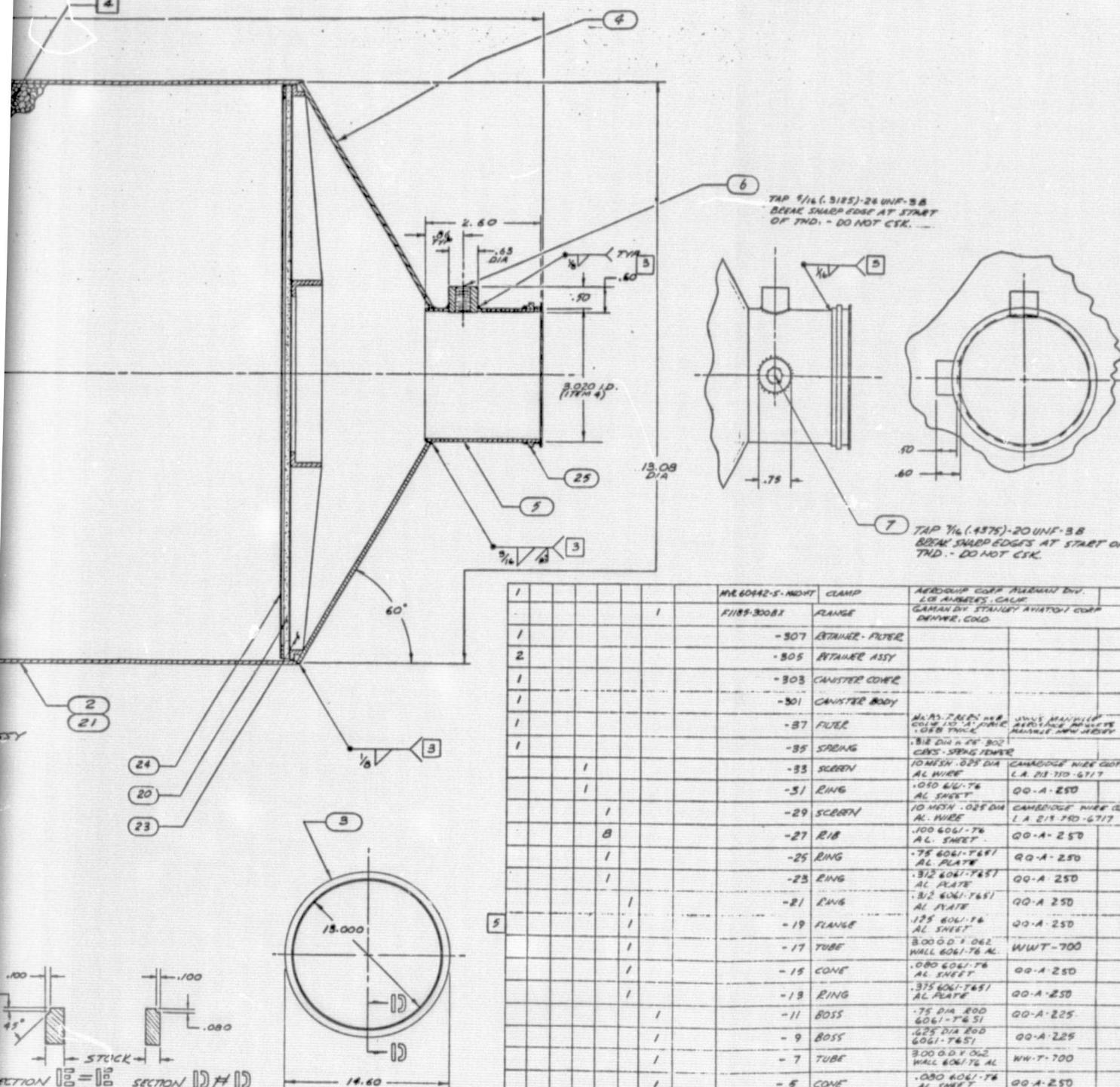
PARTS LIST

TERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	DATE 16 MARCH 1978 DR R.B. MAINE	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
			APPD	APPD	THERMOCOUPLE ASSY	
			ENGRG		REGENERABLE BED	
			CHK AW		TCCS	
			APPD	SIZE	CODE IDENT	DRAWING NO.
			CONTR	C		REV
			APPD			CC - 116
ASSY	USED ON	CCA/CEI		SCALE V1		SHEET 1 OF 1
APPLICATION						



ORIGINAL PAGE IS
OF POOR QUALITY

FOLDOUT FRAME



INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DWG ARE IN INCHES TOLERANCES ON:	DATE 27 MARCH 1973 DRAWN E.B. MAINE	LOCKHEED MISSILES & SPACE COMPANY INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BUNNYVALE, CALIFORNIA		
		FRACTIONS = $\pm 1/16$ DECIMALS: $X = \pm .1$ $.X = \pm .03$ $.XXX = \pm .010$ ANGLES ± 2 DEG	APVD APVD ENRG CHKR (20)	CANISTER-FIXED BED TCCS		
NEXT ASSY	USED ON	CONTR	APVD	SIZE	CODE IDENT	DRAWING NO
APPLICATION		CCA/C/FD	APVD	E	CC-117	REV
				SCALE	NOTED	SHEET 1 OF 2

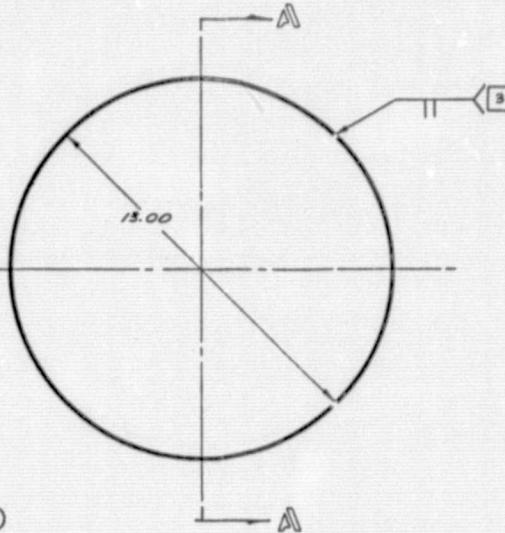
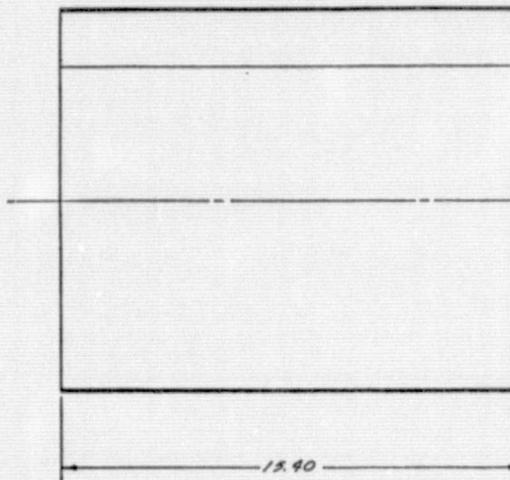
TWO ITEM II (-19) FLA 11683

APPROX. 4.6 POUNDS OF 416 MESH BARNESEBY CERAMIC
DIAL IMPREGNATED WITH 2 MILLIMOLE/GRAM OF
IC ACID.
LAC 3853-0.50300
32 ARTICLES SPEC LAC 3601
CHINE AFTER WELLING

CHINE AFTER WELLING

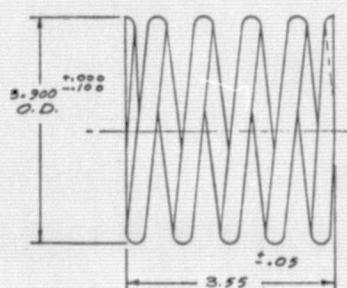
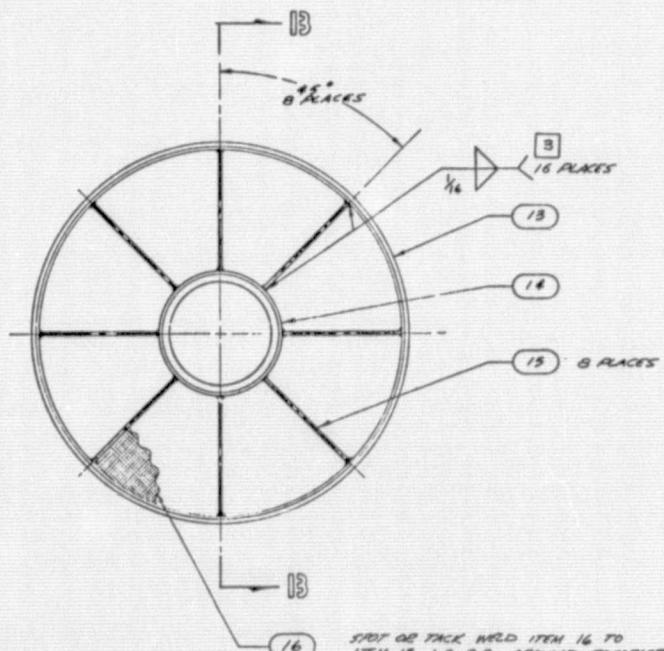
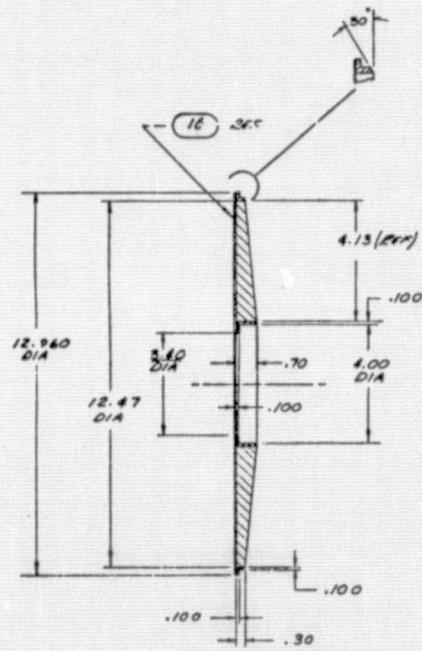
FOLDOUT FRAME B-26

H
G
F
E
D
C
B
A



.100

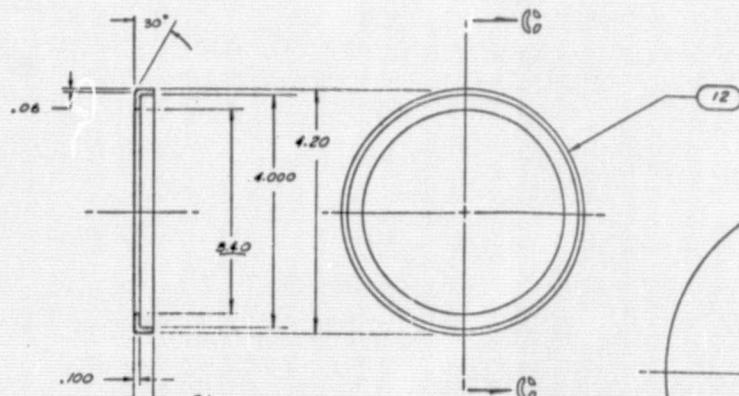
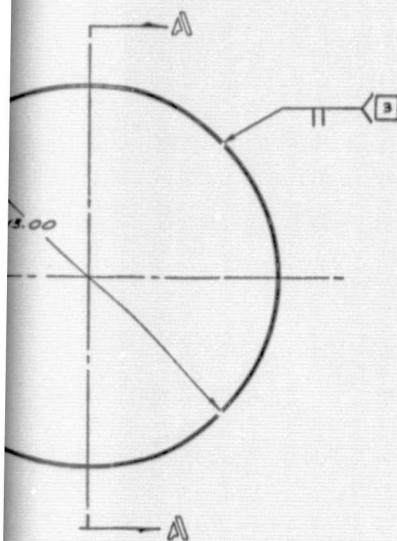
SECTIONAL



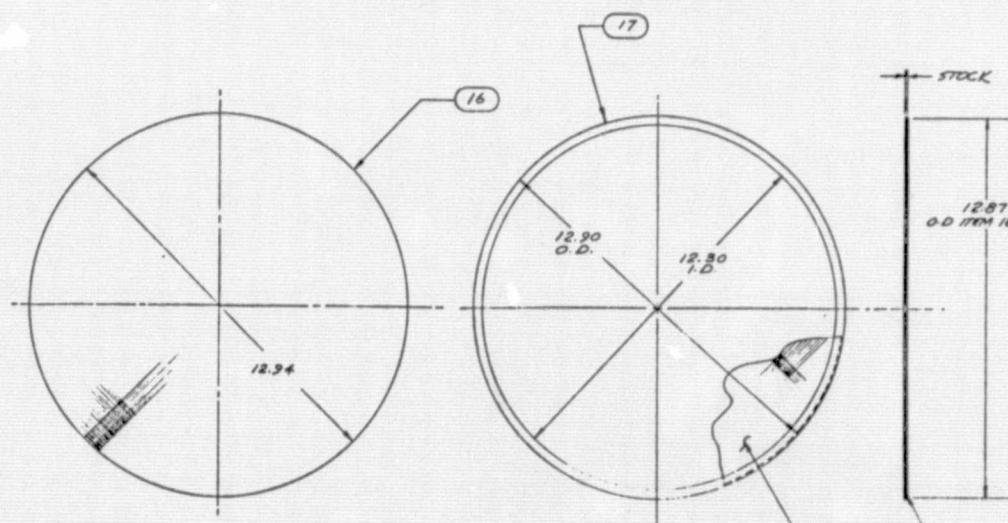
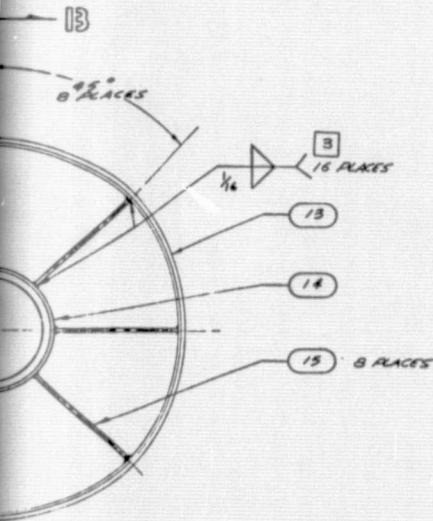
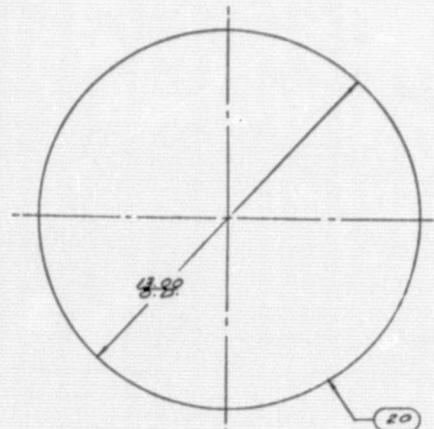
HELIUM: RT OR LT T. HAN.D
ENDS: SQUARED, GROUND
FREE TURNS: 4
WIRE: .312 DIA - 302 GRDS.
SPRING TEMPER

DETAIL ITEM 19 (.35) SPRING
SCALE $\frac{1}{8}$

ORIGINAL PAGE IS
OF POOR QUALITY



DETAIL ITEM 12 (-21) RING
SCALE $\frac{1}{4}$



DETAIL ITEM 16 (-29) SCREEN
SCALE $\frac{1}{8}$

DETAIL ITEM 24 -307 RETAINER ASSY
SCALE $\frac{1}{2}$

SPOT OR TACK WELD ITEM 16 TO
ITEM 18 1.0 O.C. AROUND COMPLETE
CIRC.

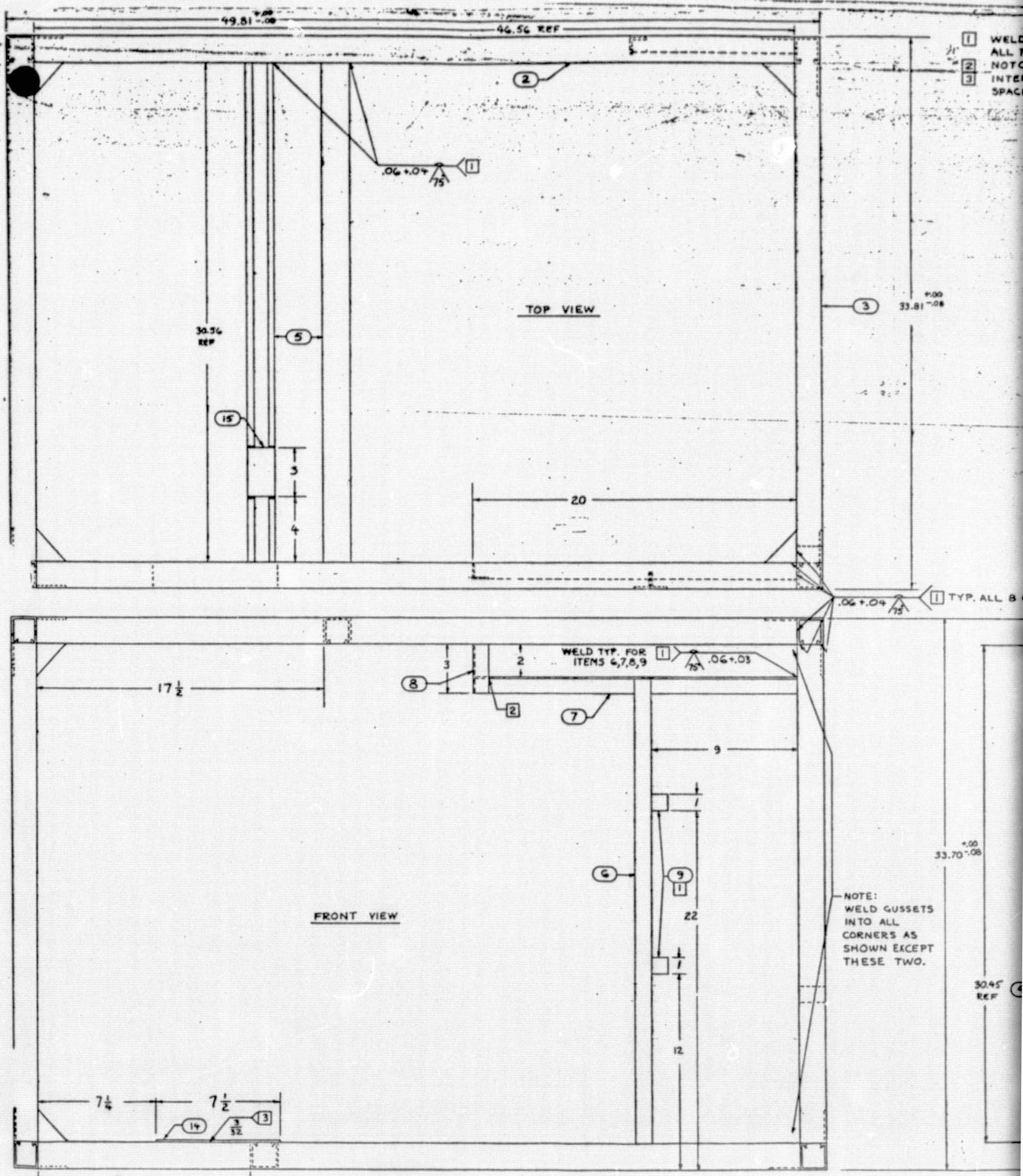
HELM: RT OR LEFT HAND
E105: SQUARED, GROUND
FREE TURNS: 4
WIRE: .312 DIA - 302 DEGS.
SPRING TEMPER

.05

DETAIL ITEM 19 (-35) SPRING
SCALE $\frac{1}{4}$

FOLDOUT FRAME
SPOT OR TACK WELD
ITEM 18 TO ITEM 17 AT 1.0
O.C. AROUND COMPLETE CIRC.

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
PARTS LIST							
			UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. CLEARANCES ON: FRACTIONS = $\pm \frac{1}{16}$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 27 APR 1973 DRAWN E.B. MAINE APVD	LOCKHEED MISSILES & SPACE COMPANY INC A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
				ENGRO			
				CHER			
				APVD			
NEXT ASSY USED ON APPLICATION	CONTR CCA/CII/FD			SIZE CODE IDENT	DRAWING NO	REV	
				E	CC-117	-	
				SCALE	NOTE 780		

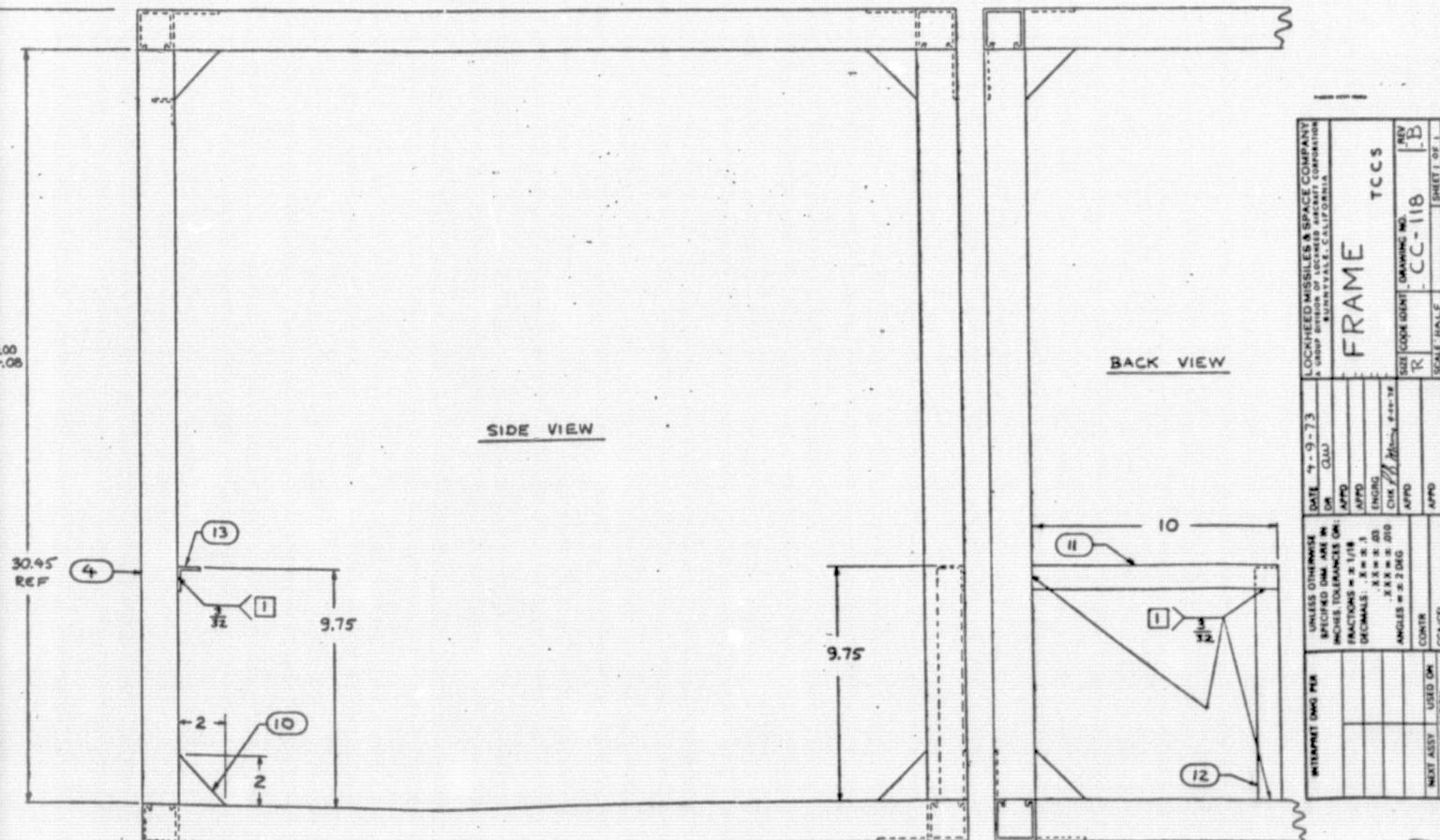


NOTES

WELD PER LAC 3853-050300. WELD
ALL POSSIBLE EDGES IN CONTACT.
NOTCH AS REQD. TO FIT.
INTERRUPTED WELD BEADS $\frac{1}{8}$ LONG,
SPACED $2\frac{1}{2}$ INCHES, ALONG BOTH EDGES.

REVISIONS		DATE APRIL 20
LTR	DESCRIPTION	
A	ADD BACK VIEW. ADD ITEMS H-14. ADD NOTE 3.	5/17/71 as
B	ADD ITEM 15.	5/17/71

TYP. ALL 8 CORNERS



LIMITED
CALENDAR
LIFELIMIT
OPER
LIFE

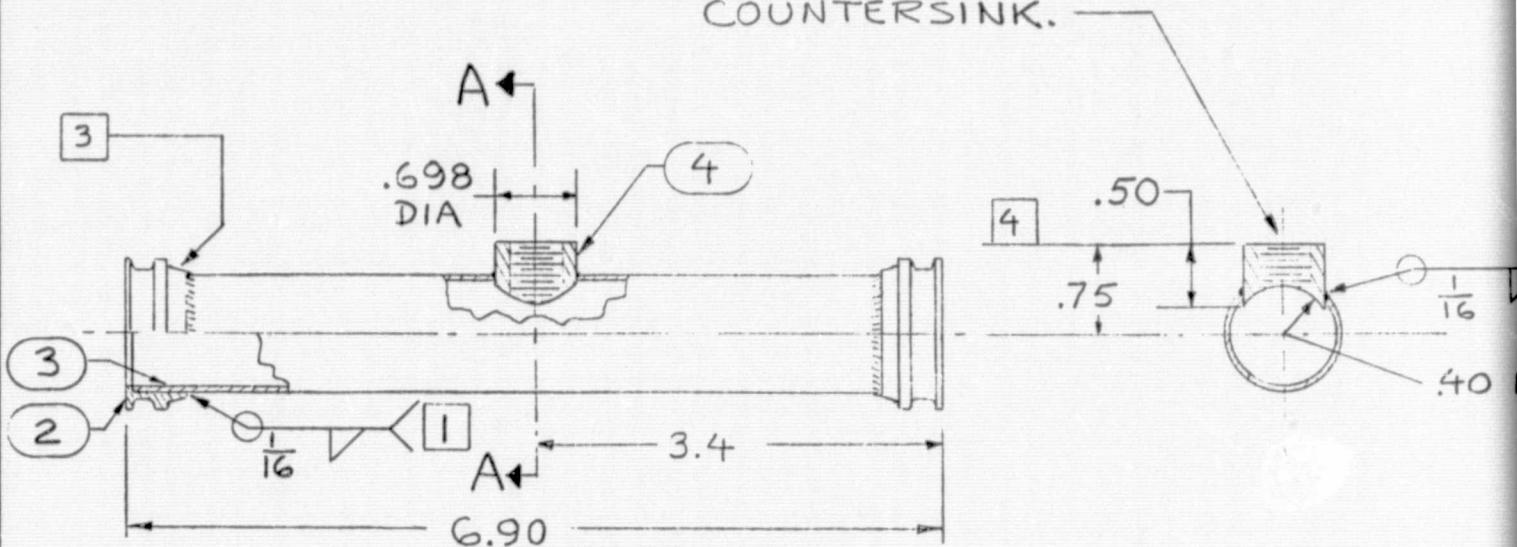
THREAD $\frac{7}{16}$ -20 UNF [4].
ONLY BREAK SHARP
EDGE AT START OF
THREAD. DO NOT
COUNTERSINK.

D

C

B

A

NOTES:

- [1] WELD PER LAC 3853-050200 .
- [2] CLEAN PER LAC 0170 AFTER COMPLETION OF WELD INSPECTION AND OTHER MFG. OPERATIONS.
- [3] CHAMFER ITEMS [2] 15° TO FACILITATE WELDING
- [4] TOP SURFACE OF BOSS MUST BE PERPENDICULAR TO AXIS OF THREAD WITHIN $\frac{1}{4}^\circ$ AND MUST HAVE $32\sqrt{}$

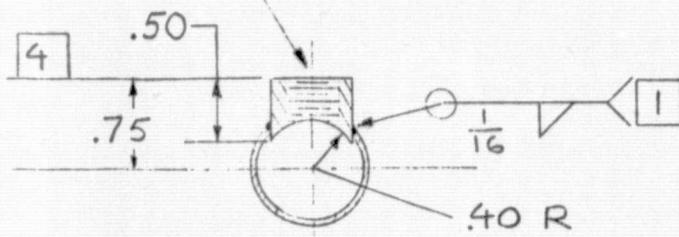
SECTION A-A

1		
1		
2		
		CC-119-501
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON FRACTIONS = $\pm \frac{1}{16}$ DECIMALS: . X = $\pm .01$. XX = $\pm .03$. XXX = $\pm .010$ ANGLES = ± 2 DEG
		CONTR
NEXT ASSY	USED ON	CCA/CEI
	APPLICATION	

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	LTR	REVISIONS	DESCRIPTION	DATE	APPD

20 UNF 4.
K SHARP
START OF
DO NOT
SINK.

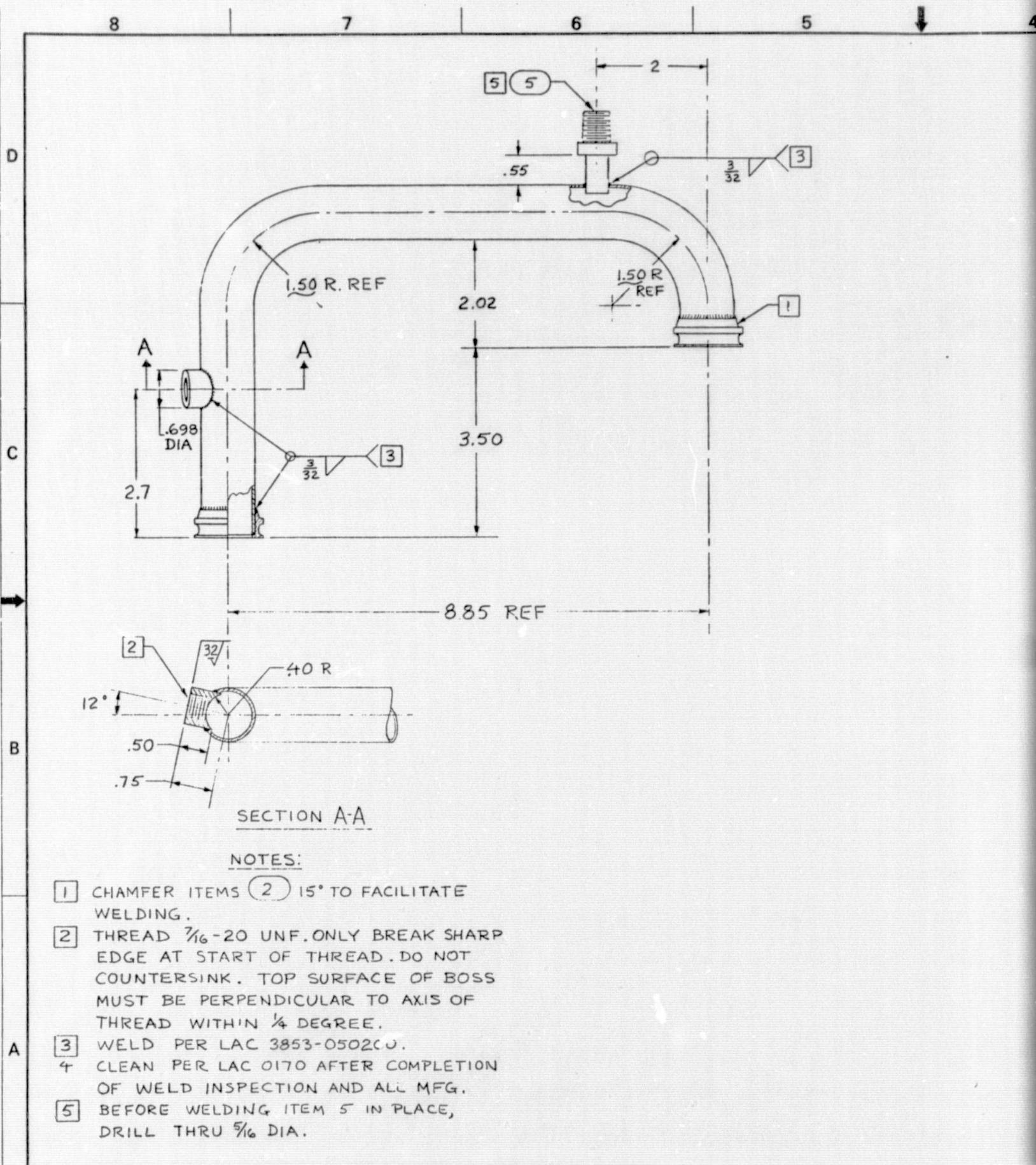


SECTION A-A

1			BOSS	3/4 DIA ROD 321/347 CRES	QQS-763		4
1			TUBING	1 INCH O.D. X .049 WALL	304 ELC OR 321 OR 347		3
2			FLANGE	3 GAMAH F20010 C	15-5 P.H. CRES		2
		CC-119-501	DUCT	ITEMS 2,3,4			1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.

PARTS LIST

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	DATE 4-10-73	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA							
			DR AW								
			APPD								
			APPD	DUCT, PRE-SORB TO CAT. OX.							
			ENGRG								
			CHK f B Main 4-12-75								
			APPD	SIZE	CODE IDENT	DRAWING NO.	REV				
			CONTR	C		CC-119	-				
			APPD	SCALE: FULL		SHEET 1 OF 1					
ASSY	USED ON										
APPLICATION		CCA/CEI									



4

3

2

1

		REVISIONS		
LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE LTR	DESCRIPTION	DATE APPD
		CC 7D	A 1.50 RADII WERE 1.75 REF. DELETE .77, ADD 2.02	5/17/73 AW
		GD 8A	B ADD ITEM 5. ADD .55 & 2 DIMS. ADD NOTE 5	6/2/73 AW

D

C

B

1		SWAGELOK GOI-A-4-316	SEE NOTE 5	TYPE 316 CRSS	5
1		BOSS	3/4 DIA ROD 321 OR 347	QQ5-763	4
1		TUBING	MAKE FROM UMSC SK-TC-004	304 ELC OR 321 OR 347	3
2		FLANGE 1	GAMAH F20010 C	15-5 PH CRSS	2
		CC-120-501	DUCT	ITEMS 2,3,4	1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION
					ZONE ITEM NO.

PARTS LIST

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	DUE 4-11-73 DR AW APPD APPD ENGRG CHK RB-Main 4-12-73 APPD CONTR APPD	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA
NEXT ASSY	USED ON		DUCT, CAT. OX. TO POST-SORB TCCS	
APPLICATION	CCA/CEI		SIZE CODE IDENT DRAWING NO. REV D CC-120 B SCALE: FULL SHEET 1 OF 1	

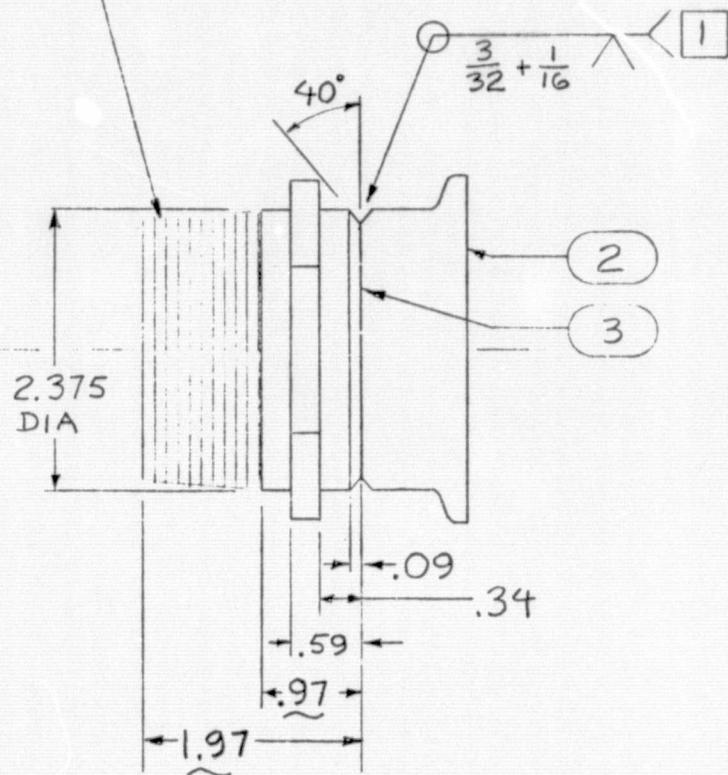
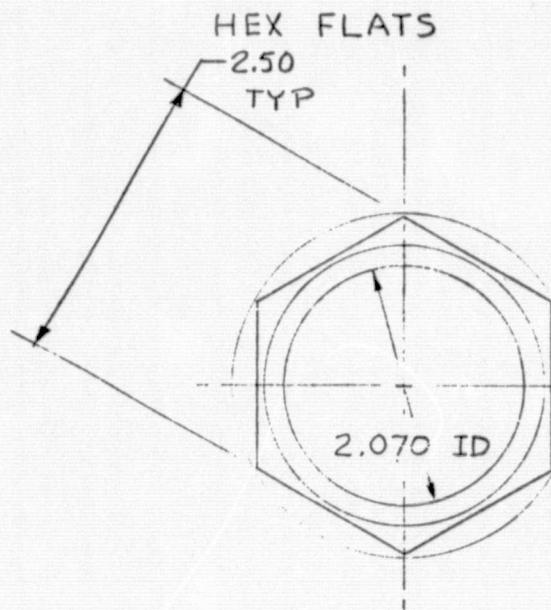
B-30

FOLDOUT FRAME

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE
-----------------------------	------------------------------

D

2 INCH
NATIONAL
PIPE THRD.

NOTES

1. WELD PER LAC 3853-050200
2. CLEAN PER LAC 0170 AFTER COMPLETION OF WELD INSPECTION & MFG. OPERATIONS.

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOM D
4			TH
4		MFM 5700-A-200	FLA FL
4		CC-121-501	THR

B

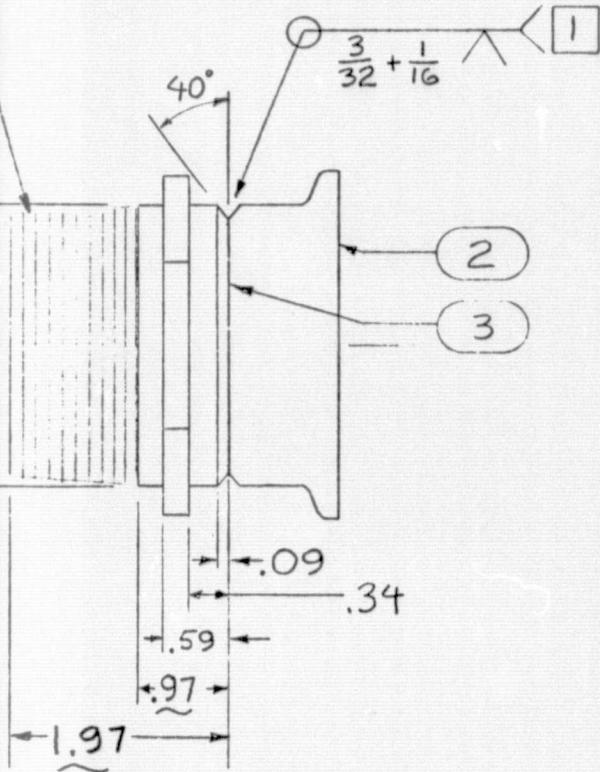
A

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	
NEXT ASSY	USED ON	CONTR	DATE
	APPLICATION		DR
			APPD
			APPD
			ENGR
			CHK
			APPD
			APPD
			CCA/CEI

LIMITED CALENDAR LIFE | LIMITED OPERATING LIFE

		REVISIONS			
ZONE	LTR	DESCRIPTION		DATE	APPD

D



C

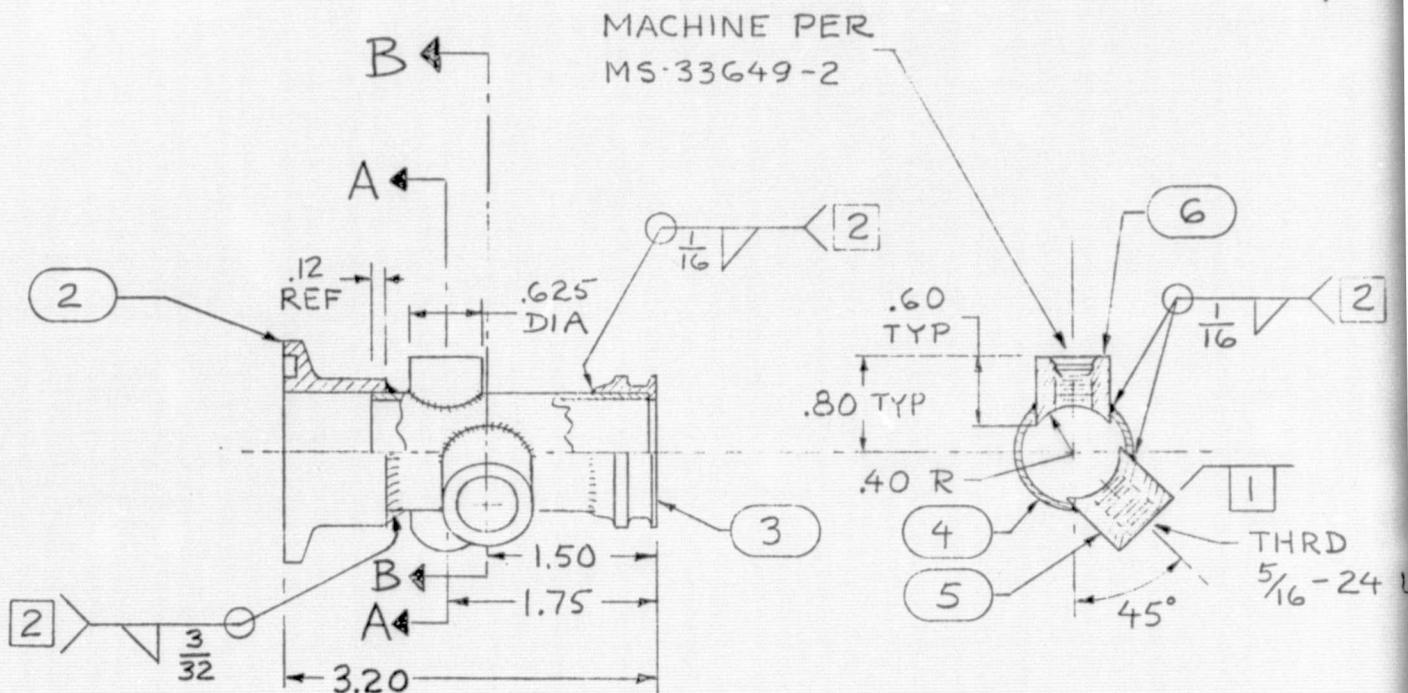
B

A

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
PARTS LIST							

TERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON:		DATE 4-12-73	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
		FRACTIONS = $\pm 1/16$		DR AW			
		DECIMALS: $.X = \pm .1$		APPD			
		$.X X = \pm .03$		APPD			
		$.X X X = \pm .010$		ENRG			
		ANGLES = ± 2 DEG		CHK R.B. Manis 9-16-73	THREADED FLANGE		
ASSY	USED ON	CONTR	APPD		T C C S		
APPLICATION		CCA/CEI	APPD	SIZE C	CODE IDENT	DRAWING NO. CC-121	- REV -
				SCALE: FULL		SHEET 1 OF 1	

LIMITED CALENDAR LIFE | LIMIT OPER. LIFE



SECTION A-A

- NOTES

 - 1 TOP SURFACE OF BOSS MUST BE PERPENDICULAR TO AXIS OF THREAD WITHIN $\frac{1}{4}^{\circ}$.
 & MUST HAVE 32 FINISH.
 - 2 WELD PER LAC 3853-050200.
 - 3. CLEAN PER LAC 0170 AFTER COMPLETION
 OF WELD INSPECTION & MFG. OPERATIONS.
 - 4 ONLY BREAK SHARP EDGES AT START
 OF THREAD. DO NOT COUNTERSINK.

		F1185-100 BX
		MFM 5703-A-100
		CC-122-501
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.

INTERPRET DWG PER

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE
SPECIFIED DIM. ARE IN
INCHES. TOLERANCES ON:
FRACTIONS = $\pm 1/16$
DECIMALS: .X = $\pm .1$
 .XX = $\pm .03$
 .XXX = $\pm .010$
ANGLES = ± 2 DEG

CONTR
CCA/CE

LIMITED
CALENDAR
LIFE

LIMITED
OPERATING
LIFE

ZONE	LTR	REVISIONS		DATE	APPD
A		ADD ITEM 7 & SECT. B-B.		7/27/73	aw

ER
2

[2]

BO

.40 R

[5]

[4]

45°

THRD

5/16-24 U.N.F.

[4]

[1]

[1]

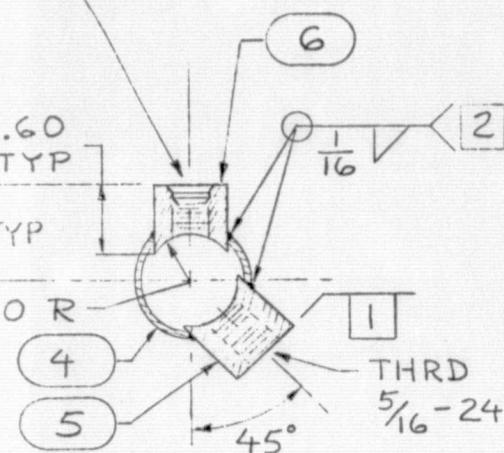
[1]

[1]

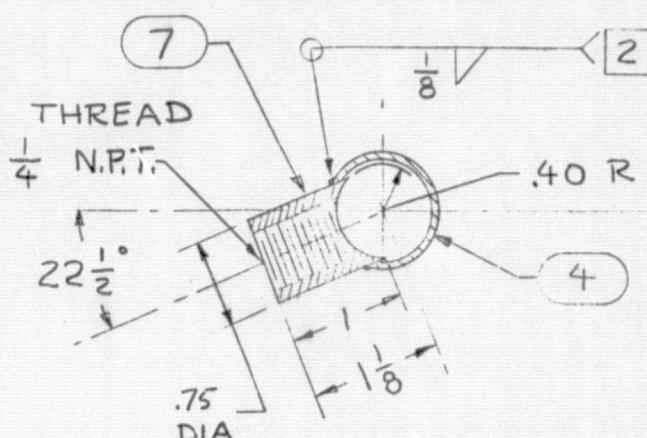
[1]

[1]

[1]



SECTION A-A



SECTION B-B

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
PARTS LIST							

INTERPRET DWG PER

UNLESS OTHERWISE
SPECIFIED DIM. ARE IN
INCHES. TOLERANCES ON:
FRACTIONS = $\pm 1/16$
DECIMALS: $.X = \pm .1$
 $.XX = \pm .03$
 $.XXX = \pm .010$
ANGLES = ± 2 DEG

DATE 4-12-73

DR aw

LOCKHEED MISSILES & SPACE COMPANY
A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION
SUNNYVALE, CALIFORNIA

APPD

APPD

ENGRG

CHK R.B. Marine 4-16-73

DUCT, BLOWER-TO-
VALVE

APPD

SIZE CODE IDENT DRAWING NO. REV

C

CC-122 A

SCALE: FULL

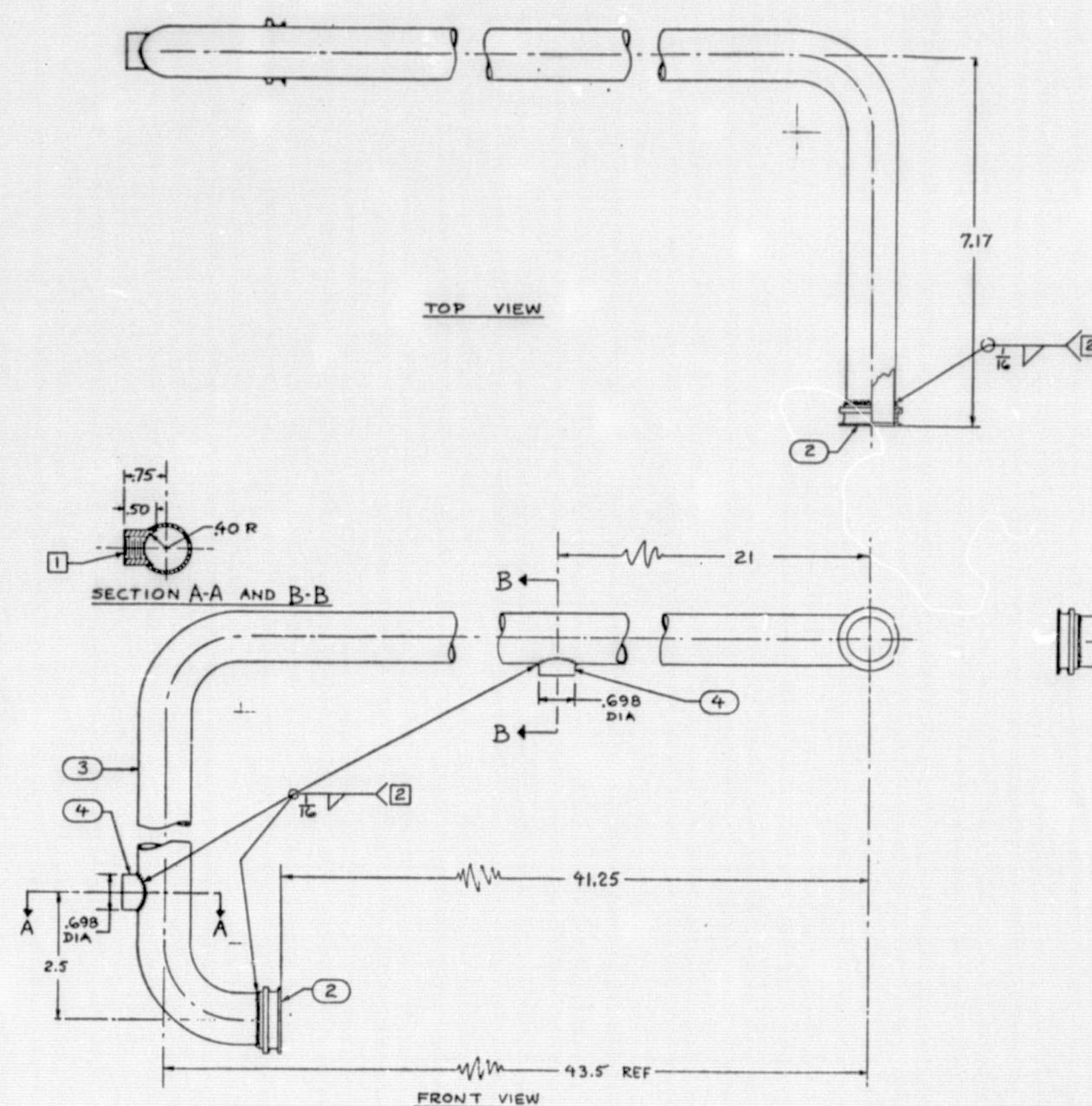
SHEET 1 OF 1

T ASSY USED ON
APPLICATION CCA/CEI

APPD

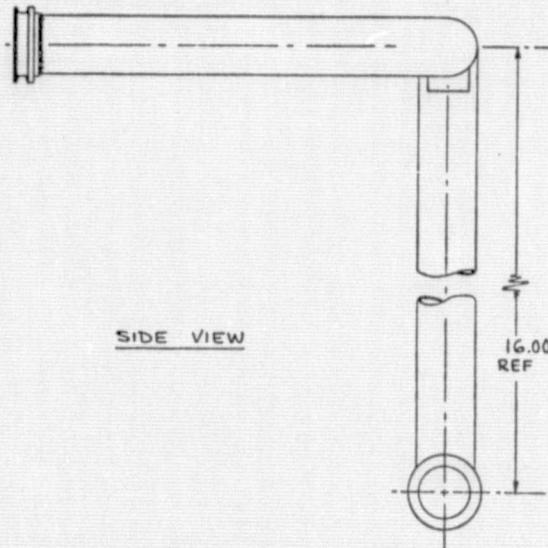
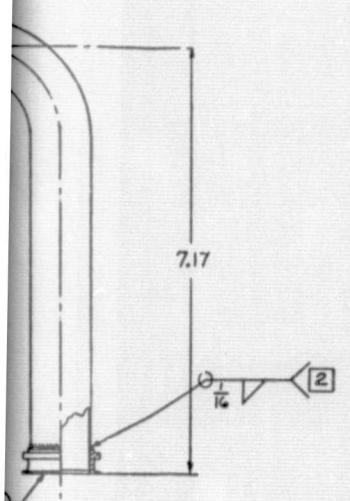


8 | 7 | 6 | 5 | 4



A
ORIGINAL PAGE IS
OF POOR QUALITY

		REVISIONS		
ZONE	LTR	DESCRIPTION	DATE	APVD
GE	A	ADD 1 ADD'L. ITEM 4 AT SECTION B-B.	4-27-73	QW



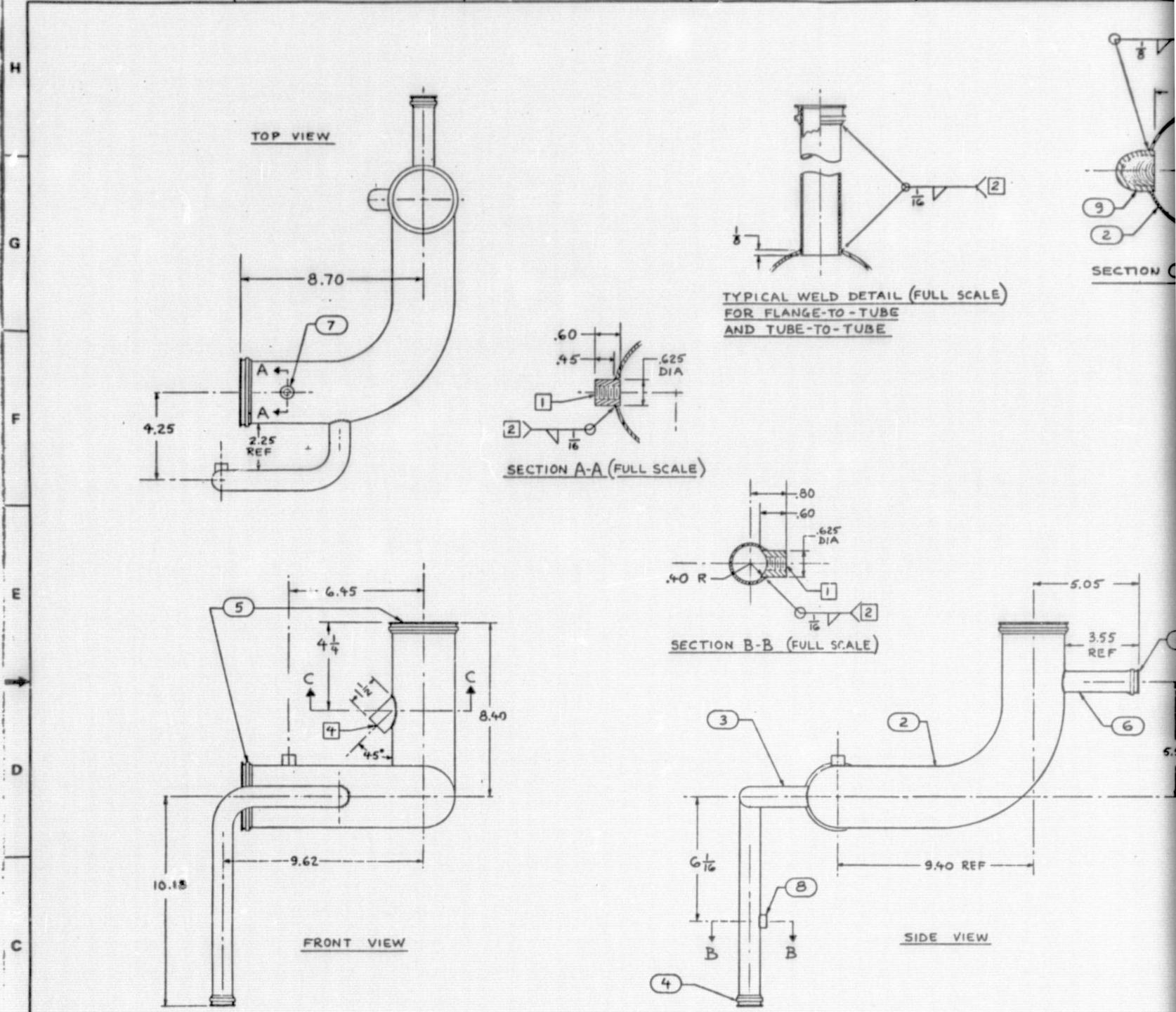
SIDE VIEW

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO
2		BOSS	3/4 DIA ROD	6061 T6		4	
1		BENT TUBE	L132C SK-TC-003			3	
2		GAMAH FLANGE F1185-100 BX		6061 T6		2	
1	CC-123-501	DUCT	ITEMS 2,3,4			1	

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS = ± 1/16 DECIMALS: .X = ± .1 .XX = ± .03 .XXX = ± .010 ANGLES = ± 2 DEG		DATE 4-13-73	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BUNNYVALE, CALIFORNIA	
NEXT ASSY	USED ON	CONTR	APVD	APVD	APVD	APVD
				DUCT, POST-SORB EXIT		TCCS

SIZE CODE IDENT DRAWING NO REV
E CC-123 A
SCALE FULLY SHEET 1 OF 1

8 7 6 5 4



NOTES

- 1 THREAD $\frac{5}{16}$ -24 UNF. ONLY BREAK SHARP EDGES AT START OF THREAD. DO NOT COUNTERSINK. TOP SURFACE OF BOSS MUST BE PERPENDICULAR TO AXIS OF THREAD WITHIN $\frac{1}{8}''$ AND MUST HAVE $\frac{32}{32}$ FINISH.
- 2 WELD PER LAC 3853-050300.
- 3 CLEAN PER LAC 0170 AFTER COMPLETION OF ALL MFG. OPERATIONS & WELD INSPECTION.
- 4 THREAD $\frac{3}{4}$ -16 UNF. ONLY BREAK SHARP EDGES AT START OF THREAD. DO NOT COUNTERSINK. TOP SURFACE OF BOSS MUST BE \perp TO AXIS OF THRD WITHIN $\frac{1}{8}''$ & MUST HAVE $\frac{32}{32}$ FINISH.

A
FOLDOUT FRAME)

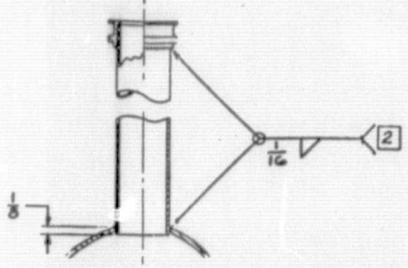
5

4

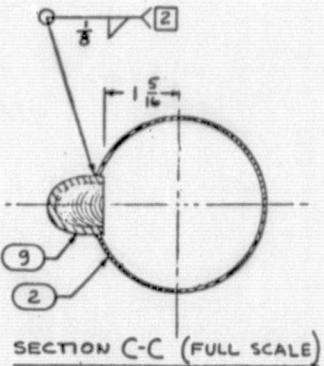
3

2

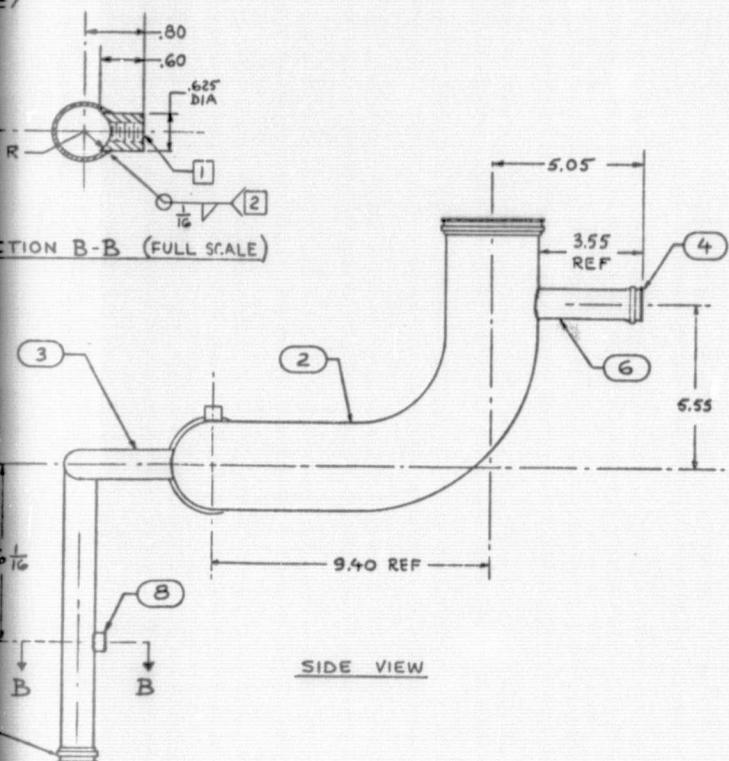
1



TYPICAL WELD DETAIL (FULL SCALE)
FOR FLANGE-TO-TUBE
AND TUBE-TO-TUBE



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE
P7	A	DELETE S.12, ADD S.62 DELETE 4.50 REF.	6-20-73 APVD
	B	ADD ITEM 9, SECT. C-C, & NOTE 4.	7-27-73 GM



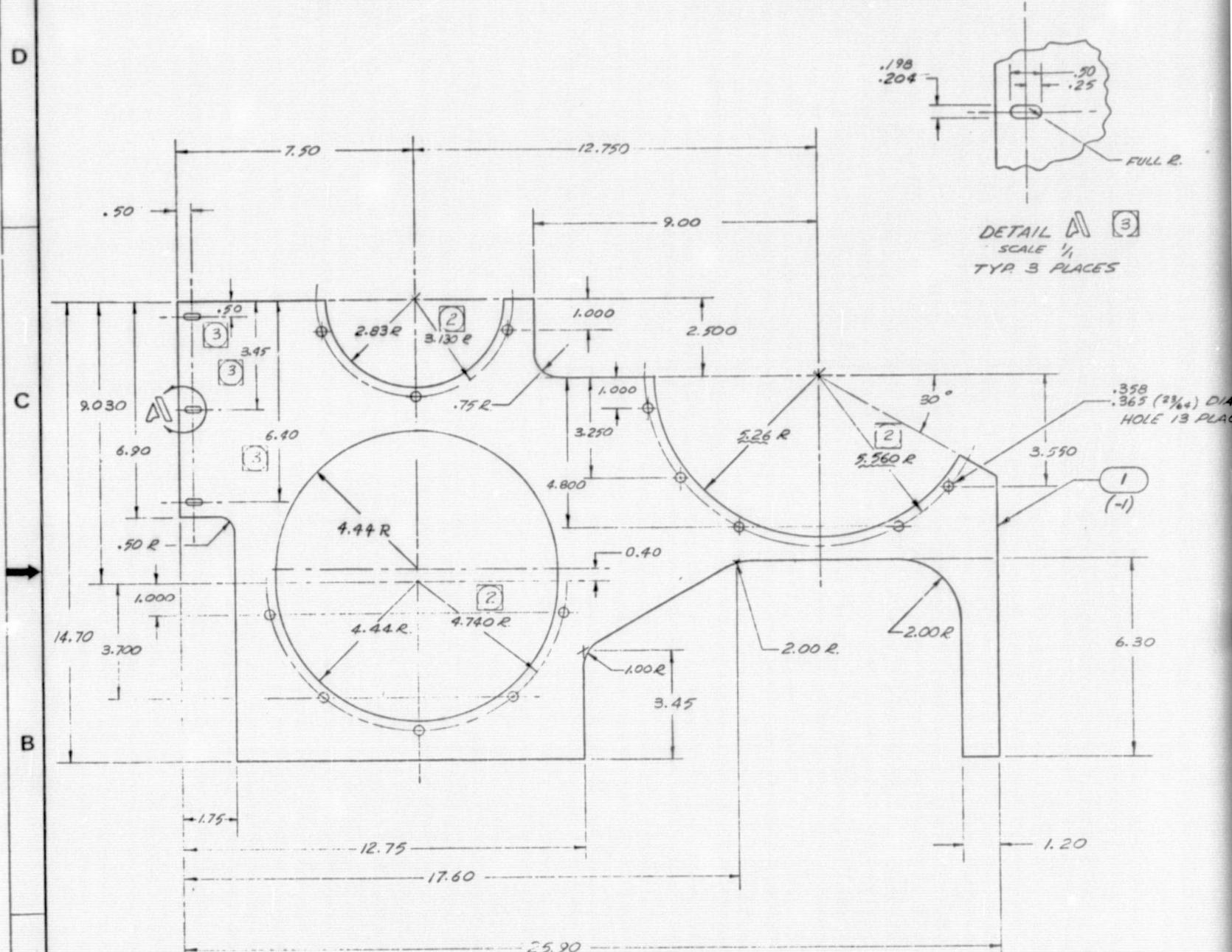
SIDE VIEW

FOLDOUT FRAME

ORIGINAL PAGE IS
OF POOR QUALITY

1		BOSS	1 DIA ROD	6061 T651	9
1		BOSS	.625 DIA ROD	6061 T651	8
1		BOSS	.625 DIA ROD	6061 T651	7
1		TUBE 1"	1 INCH DDX .049 WALL	G061 WWT 700/6	6
2		GAMAH FLANGE 3"	F1185-300BX	6061TG	5
2		GAMAH FLANGE 1"	F1185-100BX	6061TG	4
1		BENT TUBE	SK-TC-001	5052-O	3
1		BENT TUBE	SK-TC-002	5052-O	2
1	CC-124-501	DUCT	ITEMS 2 THRU 5		1
QTY ADDED	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT. OR NOTE	ITEM SPECIFICATION
					ZONE
					ITEM NO

INTERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .05$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 1-17-73 DRAWN BY APVD APVD ENGRC CCHR 10/24/73 APVD	LOCKHEED MISSILES & SPACE COMPANY INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BUNNYVALE, CALIFORNIA
NEXT ASSY USED ON	CONTR	APVD	DUCT, DELIVERY TCCS
APPLICATION	CCA/C1/FD	DRAWING NO CC-124 REV B	SCALE 1/4"
		SIZE E CODE IDENT	SHEET 1 OR 1



(3) MATCH WITH HOLES IN CC-127-321

[2] MATCH WITH HOLES IN CC-126-301, 303 & -305

1 FAB PER LAC-1241

NOTES:

4

3

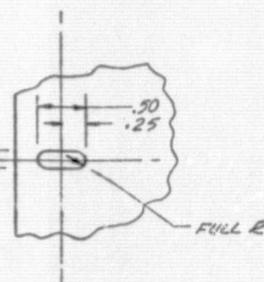
2

1

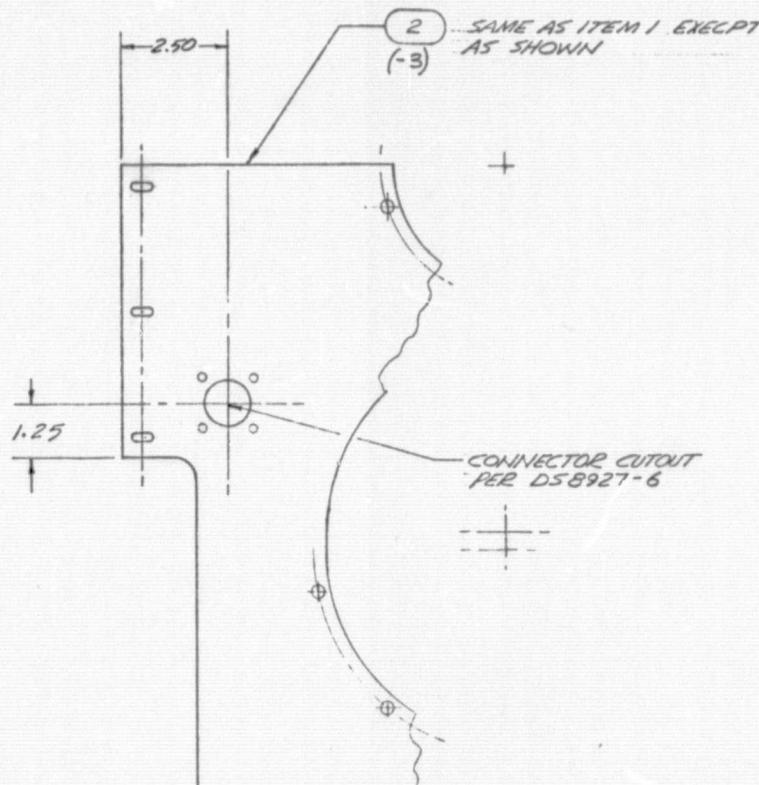
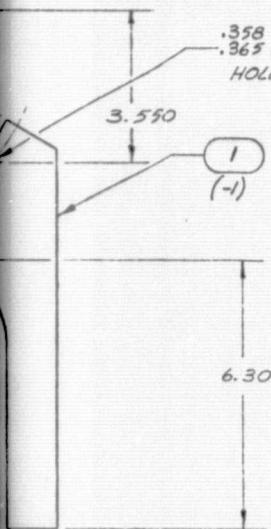
LIMITED
CALENDAR
LIFE

LIMITED
OPERATING
LIFE

REVISIONS		DATE	APPD
ZONE	LTR	DESCRIPTION	
GC	A	ADD 0.40 DIM. RAISE UPPER 4.44 R SEMICIRCLE	5/17/73 AW
7C			



DETAIL A (3)
SCALE 1/1
TYP. 3 PLACES



1		-3	WEB	+125 6060-76 AL SHEET	QQ-A-250/11	2
1		-1	WEB	+125 6060-76 AL SHEET	QQ-A-250/11	1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE ITEM NO.
PARTS LIST						
INTERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .01$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	DATE 17 APRIL 1973 DR R. B. MAIIVE	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
CC-128	TCCS	APPD	WEB - PACKET, TCCS COMPONENT MOUNTING			
NEXT ASSY	USED ON	APPD				
APPLICATION	CONTR	ENGRG				
	CCA/CEI	CHK MNTG	APPD	SIZE	CODE IDENT	DRAWING NO.
			APPD	D		CC-125
			APPD	SCALE	% E NOTED	SHEET 1 OF 1

B-35

FOLDOUT FRAME

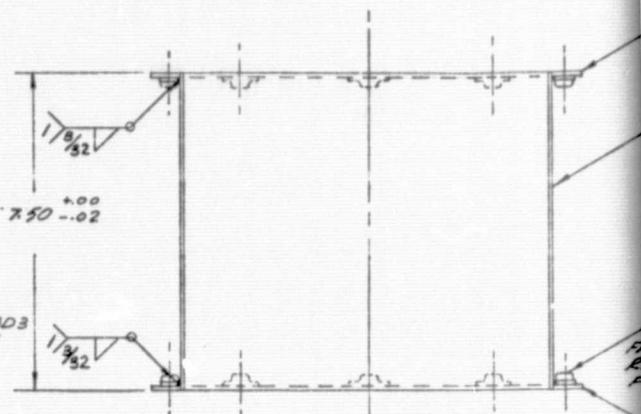
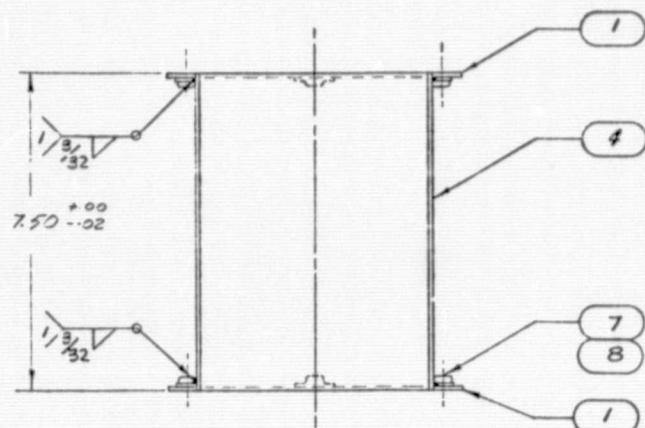
8

7

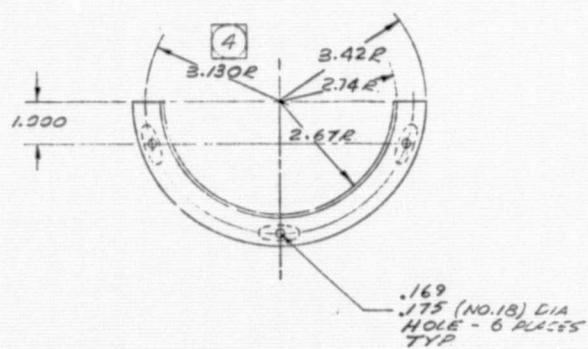
6

5

D

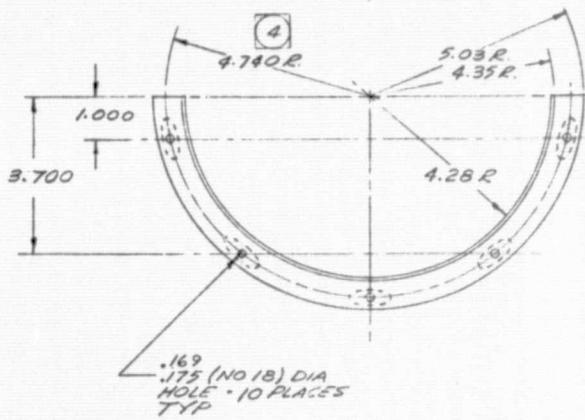


C



B

-301 CRADLE ASSY

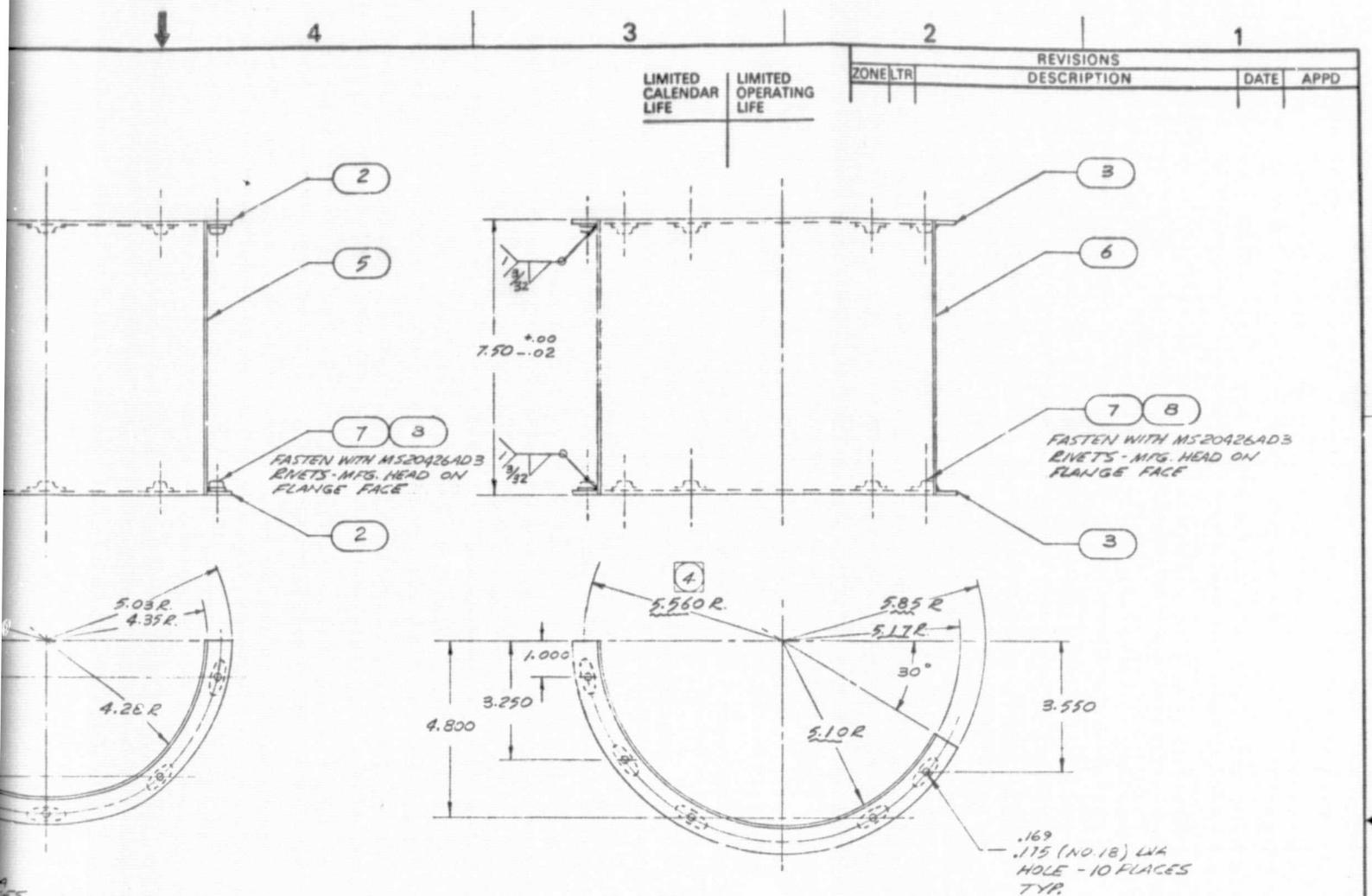


-303 CRADLE ASSY

A

- 4** MATCH WITH HOLES IN 30-125-1 & 30125-3
- 3. INSTALL MECHANICAL FASTENERS PER LAC0581
- 2. FAB PER LAC-1241
- 1. WELD PER LAC-3853-050300

NOTES:

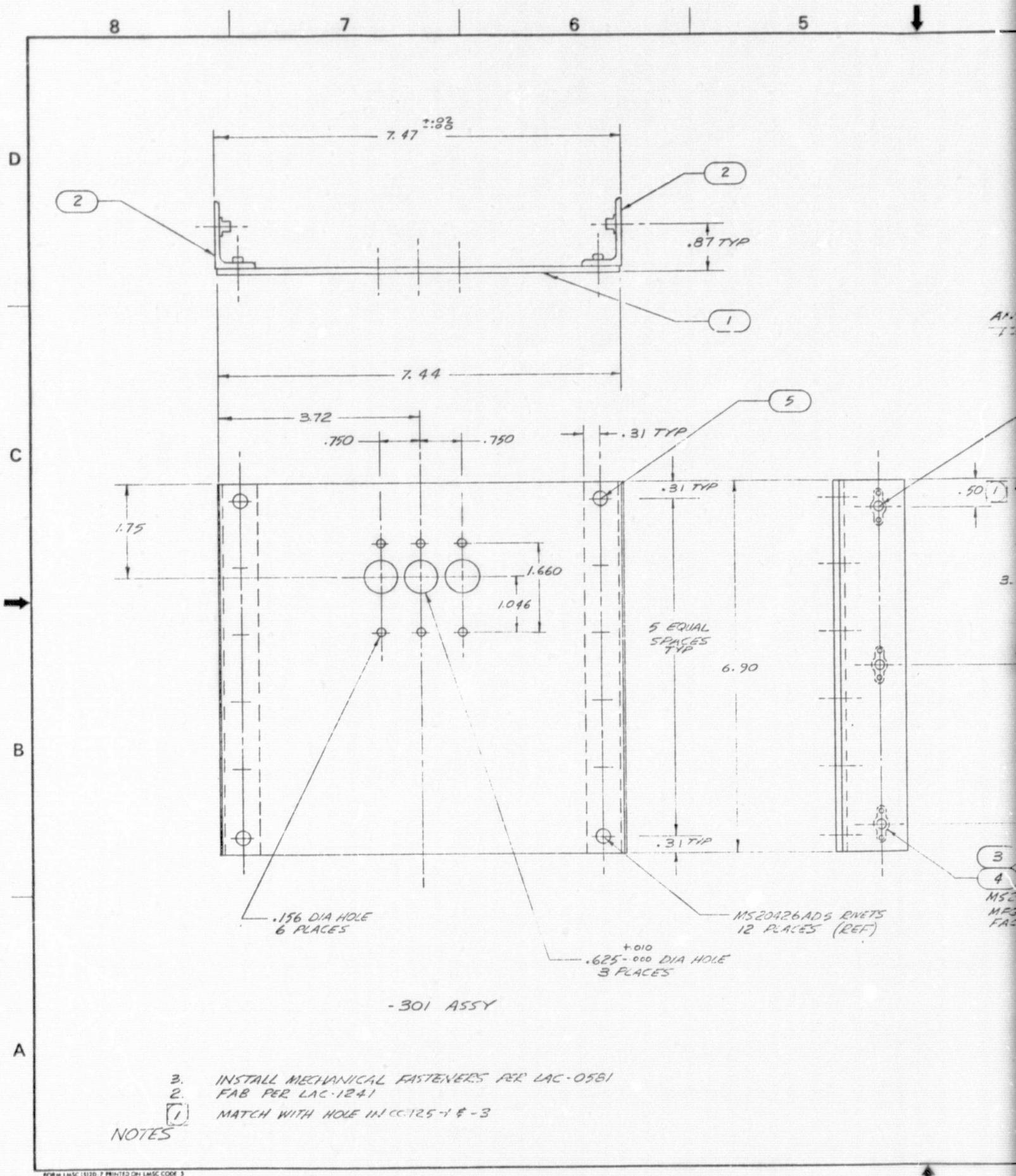


-305 CRADLE ASSY

3 CRADLE ASSY

20	20	12		M520426AD3	RIVET				8
10	10	6		L58837-03	NUT, PLATE				7
1				-11	CRADLE	.071 6061-T6 AL SHEET	QQ-A250/11		6
	1			-9	CRADLE				5
		1		-7	CRADLE	.071 6061-T6 AL SHEET			4
2				-5	FLANGE	.10 6061-T6 AL SHEET			3
	2			-3	FLANGE				2
		2		-1	FLANGE	.10 6061-T6 AL SHEET	QQ-A-250/11		1
QTY REQD		CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION		MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
-305-303		-301							

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES, TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG	DATE 13 APRIL 1973 DR R.E. MAINE	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
CC-128	TCCS	APPD	CRADLE ASSY'S - COMPONENT SUPPORT TCCS			
NEXT ASSY	USED ON	ENGRG				
APPLICATION	CONTR	CHK Aut. 5-4-73	APPD			
	CCA/CEI		APPD	SIZE D	CODE IDENT CC-126	
				SCALE 1/2	REV -	
				SHEET 1 OF 1		



FORM LMSC 1512D-7 PRINTED ON LMSC CODE 5

FOLDOUT FRAME 1

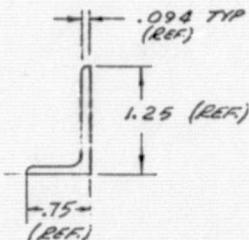
ORIGINAL PAGE IS
OF POOR QUALITY

A1.2
-724

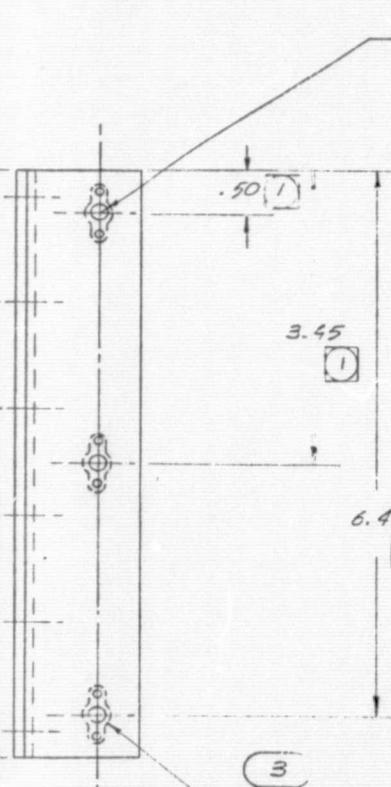
3.4

3
4
MSC
MFG
FAC

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	REVISIONS DESCRIPTION	DATE	APPD
-----------------------------	------------------------------	------	--------------------------	------	------



A1-D 10134-1202 OR
-7/16 X 3/4 X 3/32

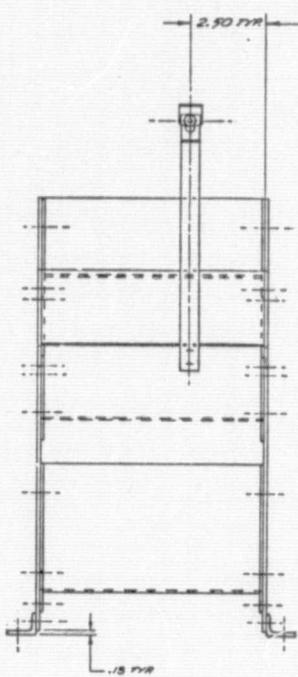
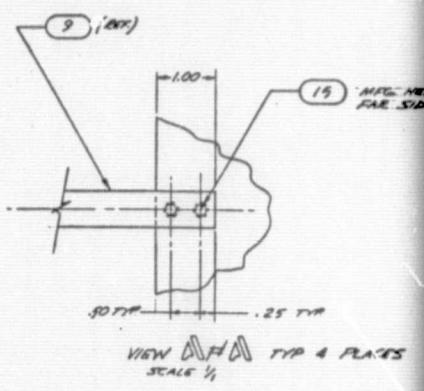
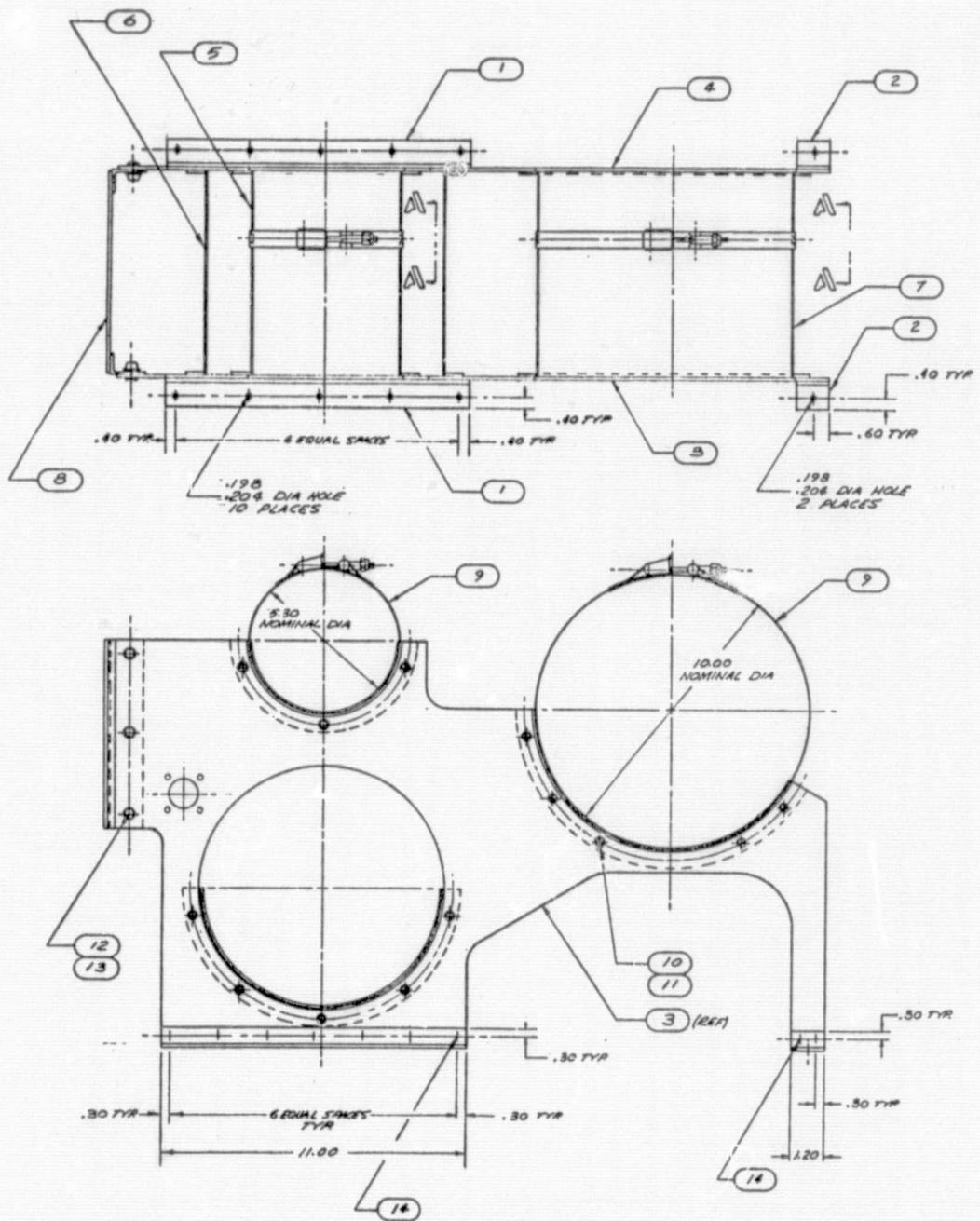


3
4 FASTEN WITH:
MS20426AD3 RIVETS
MFG. HEAD ON FLANGE
FACE

MS20426AD5 RIVETS
MFG. HEAD ON FLANGE
FACE

12	MS20426AD5	RIVET			5
12	MS20426AD3	RIVET			4
6	LS8837-3	NUT, PLATE			3
2	-3	ANGLE - EXT.	A1-D 10134-1202 OR 1/4 X 3/4 X 3/32 ALG C16	MS20426AD5	2
1	-1	PLATE	.125 6061-T6 AL. SHEET.	QQ-A-250/11	1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION
-301					ZONE ITEM NO.

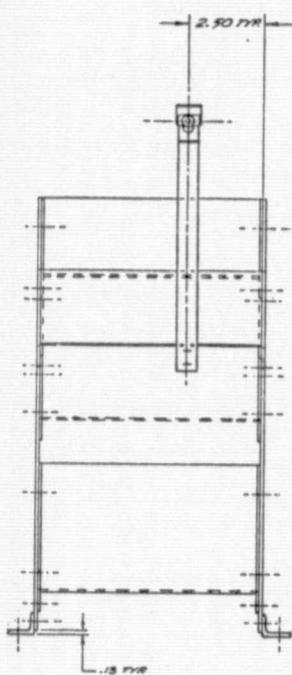
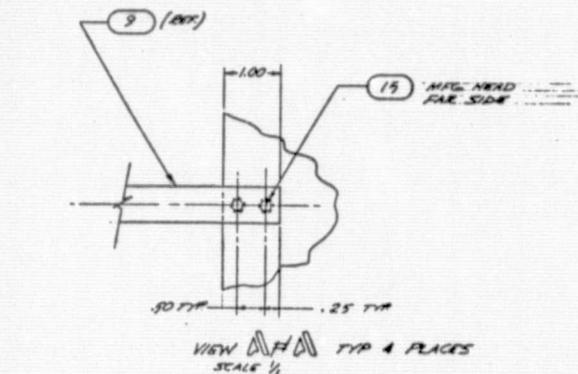
INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 20 APRIL 1973 DR R. B. MAINE	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
CC-128	TCCS	CONTR	APPD	BRACKET - EQUIP MOUNTING - TCCS		
NEXT ASSY	USED ON	APPLICATION	APPD	SIZE D	CODE IDENT CC-127	DRAWING NO. REV
		CCA/CEI	APPD	SCALE 1/1		SHEET 1 OF 1



FOLDOUT FRAME

NOTES 2
1 INSTALL MECHANICAL FASTENERS PER LAC-0581
FAB PER LAC-1261

ORIGINAL PAGE IS



FOLDOUT FRAME 2

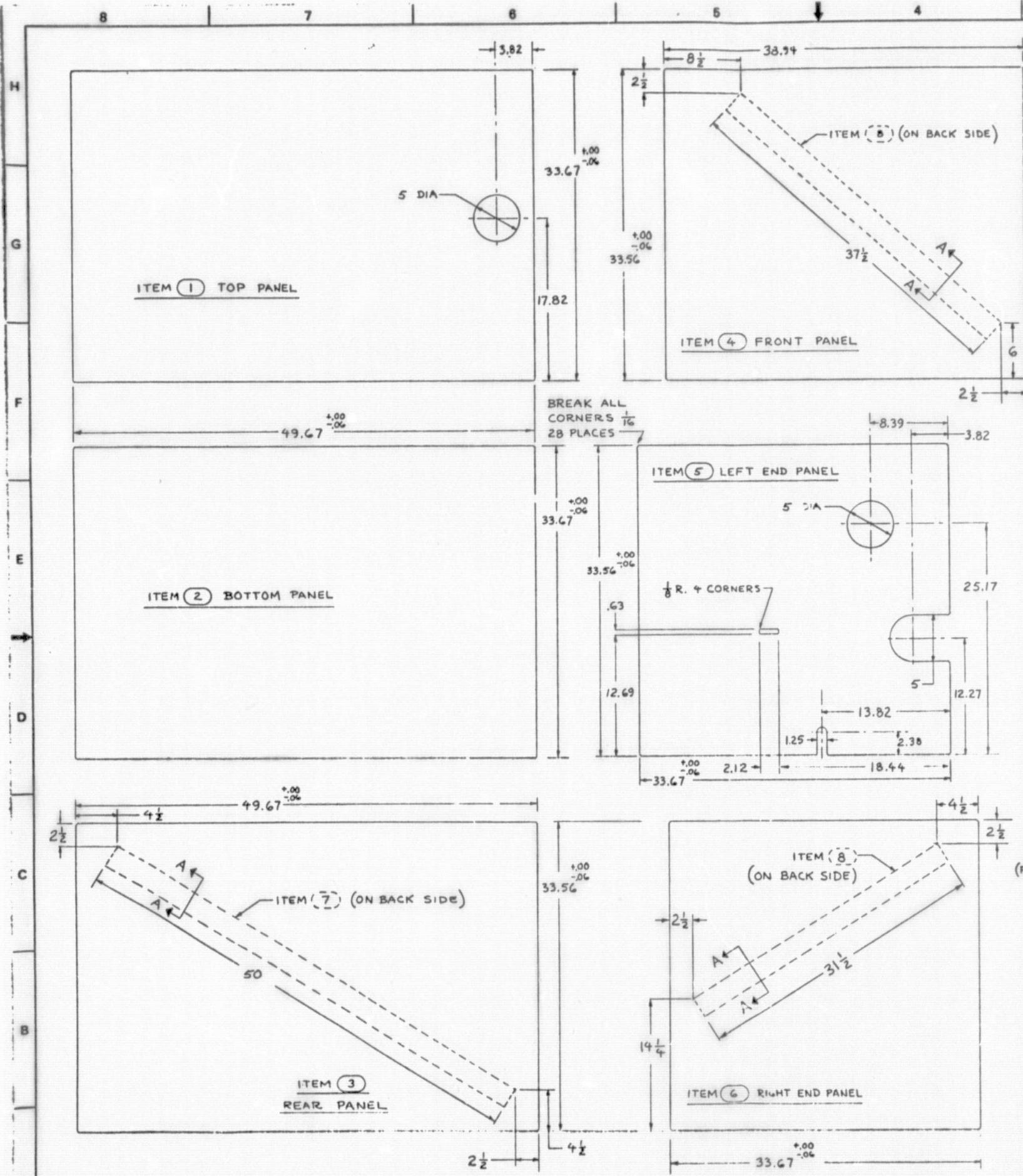
B	MS20427M4	LINETS	MATERIAL		15
1A	MS20470A05	LINETS	ALUM.		16
6	AN960C10	WASHER			13
6	LS870IT-3-10	SCREW			12
26	AN960CB	WASHER			11
26	LS870IT-08-7	SCREW			10
2	MS9325K6851000T	CLAMP ASSY	ANODIZED COPPER ALUMINUM DIVISION LOS ANGELES CALIF.		9
1	CC-127-301	BRACKET ASSY			8
1	CC-126-305	CRADLE ASSY			7
1	CC-126-303	CRADLE ASSY			6
1	CC-126-301	CRADLE ASSY			5
1	CC-125-1	WEB			4
1	CC-125-3	WEB			3
2	-3	ATTACH ANGLE	18 3/4 X 6061-T6 AL ANGLE	ML-A-25994	2
2	-1	ATTACH ANGLE	18 3/4 X 6061-T6 AL ANGLE	ML-A-25994	1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION
-501					ZONE ITEM NO

PARTS LIST

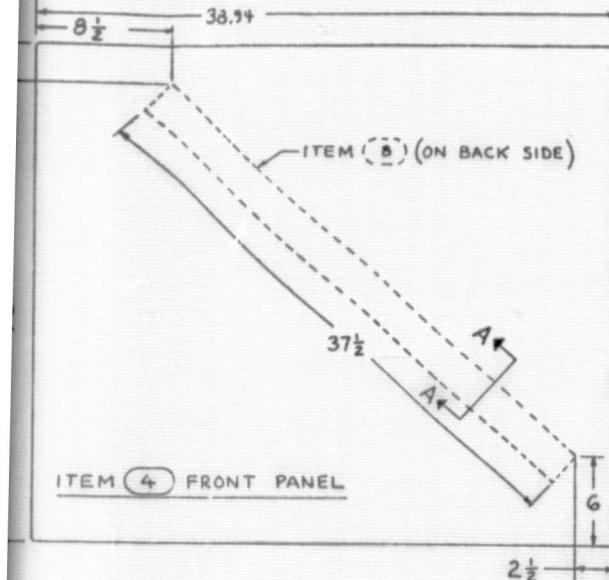
INTERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS $\pm 1/16$ DECIMALS: $X \pm .1$ $XX \pm .03$ $XXX \pm .010$ ANGLES ± 2 DEG	DATE 26 APR 1973 OWN P.B. MAINE APVO	LOCKHEED MISSILES & SPACE COMPANY INC & SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BUNNYVILLE, CALIFORNIA
TECS	CHRR ANGLES CONTR	BRACKET ASSY-CANISTER, MOUNTING - TECS	
NEXT ASSY USED ON	APVO	SIZE	CODE IDENT
APPLICATION	CCA/CI/ID	DRAWING NO	REV

SCALE 1/4 INCHES
NOTES SHEET 1 OF 1

1 INSTALL MECHANICAL FASTENERS PER LAC-0581
2 TAB PER LAC-1261

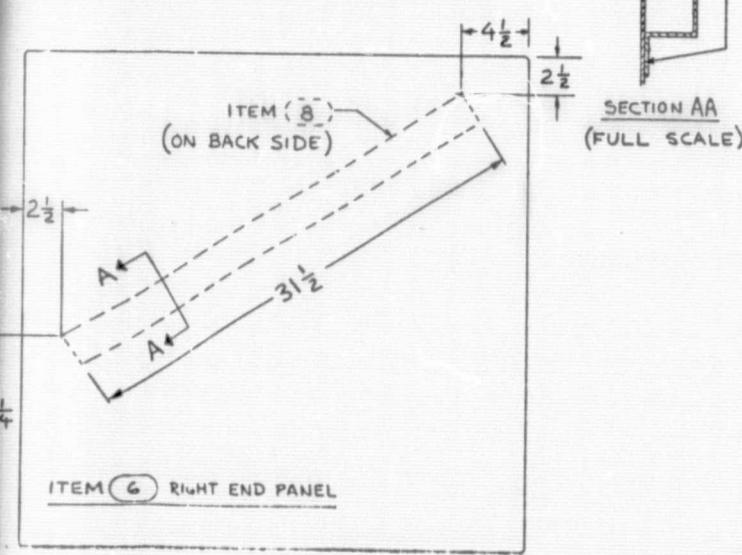
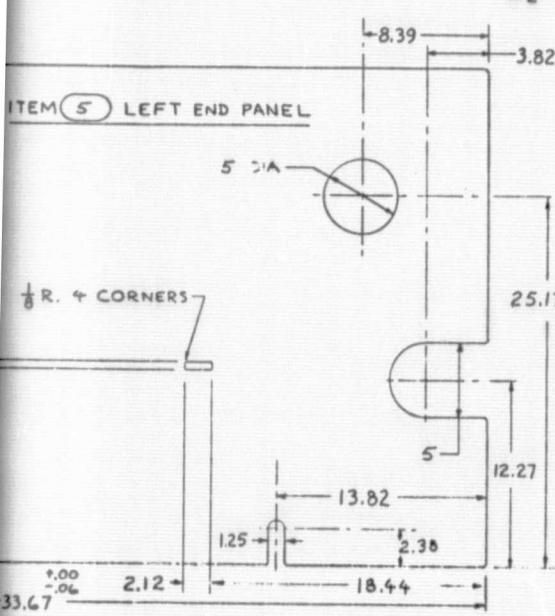


FOLDOUT FRAME)



- NOTES**
- FRONT SIDE OF ALL PANELS SHOULD BE KEPT FREE OF SCRATCHES, DISCOLORATION, etc.
 - AFTER MACHINING & BEFORE BONDING, FINISH ITEMS 1 THRU 8 PER LAC-0498-010000.
 - AFTER IRIDITING, BOND HAT SECTIONS TO PANELS PER LAC 3013-040300. SOLVENT CLEAN AREAS TO BE BONDED FIRST.

		REVISIONS	
ZONE	LTR	DESCRIPTION	DATE
5H	A	38.94 WAS 39.05	7-6-73 (AW)



AR.	EPOXY		LAC 30-4172	
2	HAT SECTION 2.36 X .8154 .064	PIONEER (LA) XTRU # PA-10649	2024 T 3511	9
1	RIGHT END		PHONE NO. 213-243-3541	8
1	LEFT END			7
1	FRONT			6
1	REAR	.063 THICK	GOGI TG	5
1	BOTTOM	.125 THICK	GOGI TG	4
1	TOP	.125 THICK	GOGI TG	3
OPV REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE
				MATERIAL SPECIFICATION
				ZONE ITEM NO

INTERPRET DRAWING		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON:		DATE / /		LEO BURNELL INCORPORATED & SUBSIDIARY OF LEO BURNELL CORPORATION BUNNYVALE, CALIFORNIA	
		FRACTIONS = ± 1/16		DRAWN / /			
		DECIMALS: .X = ± .1		APVD			
		.XX = ± .03		APVD		COVER PANELS	
		.XXX = ± .010		ENGRD		TCCS	
		ANGLES = ± 2 DEG		CHER F. (Mfg. No. 1119)			
		CONTR		APVD		SIZE CODE IDENT DRAWING NO	
		APPLICATION		E CC-129		REV A	
		CCA/CIFO		SCALE 1/4		SHEET 1 OF 1	

8

7

6

5

4

H

G

F

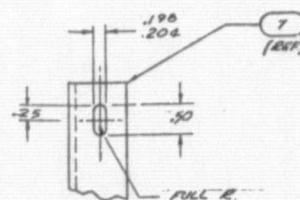
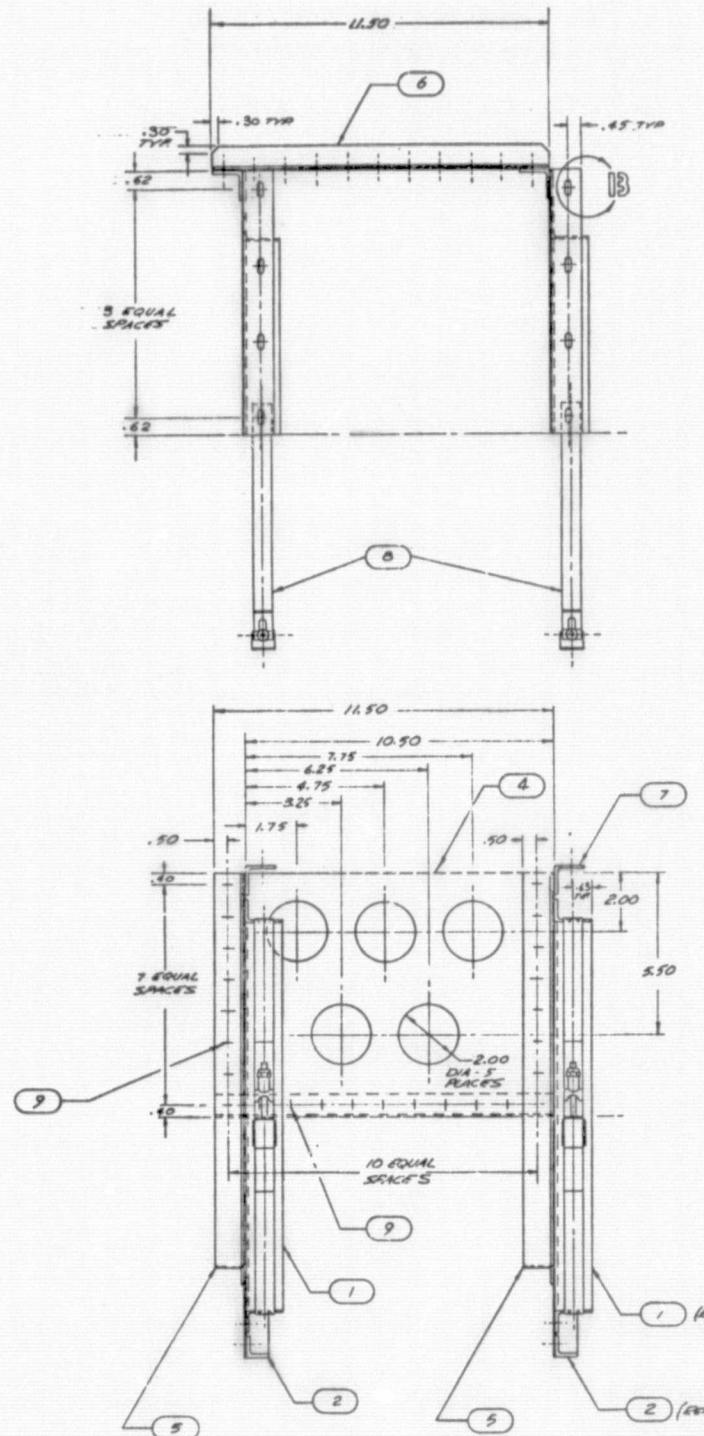
E

D

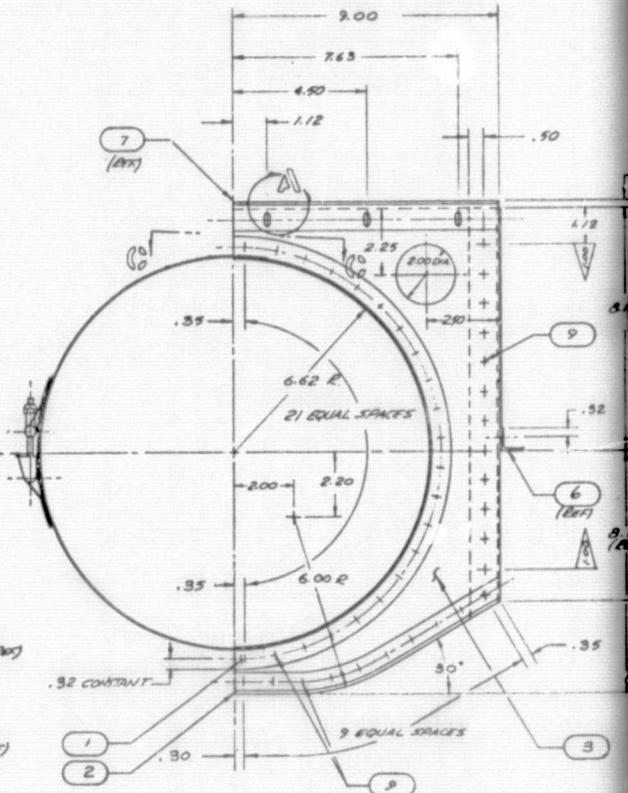
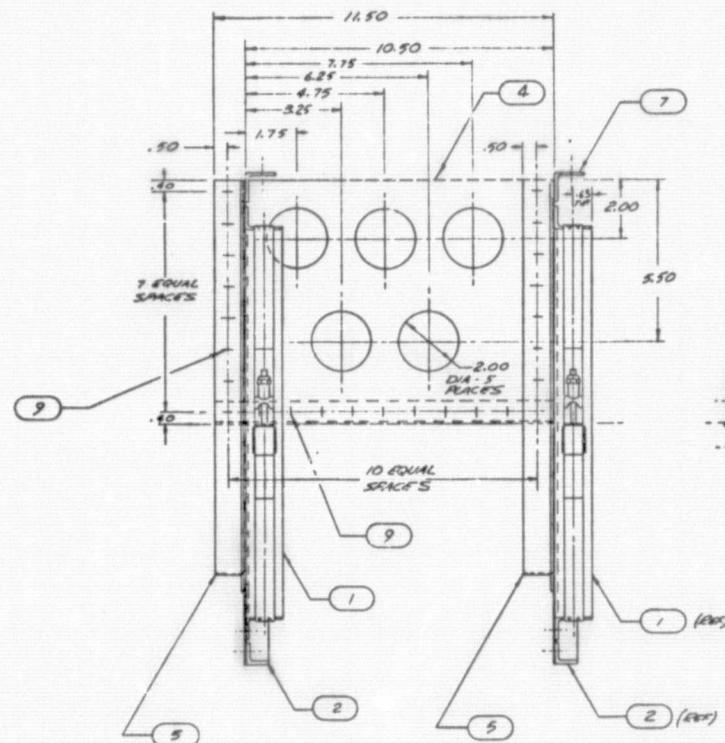
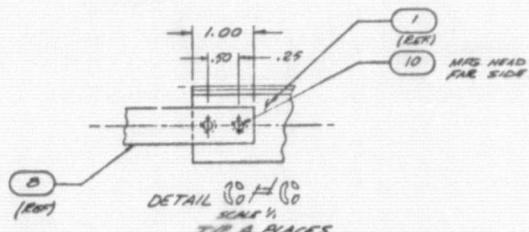
C

B

A



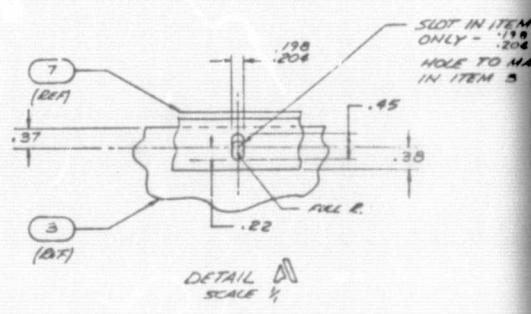
DETAIL 13
SCALE $\frac{1}{4}$
TIR 8 PLACES



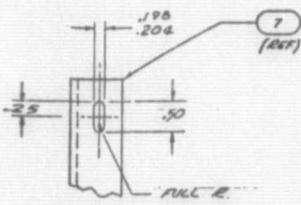
ORIGINAL PAGE IS
OF POOR QUALITY

③ AL EXTRUSION CAN BE PURCHASED FROM
PACIFIC METALS, SAN FRANCISCO, CALIF.
2. INSTALL MECHANICAL FASTENERS PER LK-0581
1. FAB PER LAC-1081

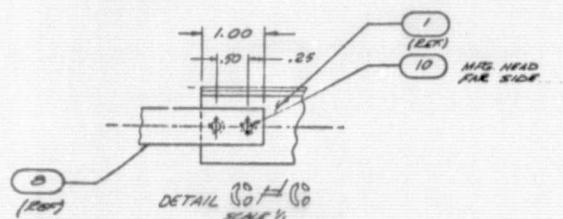
NOTES:



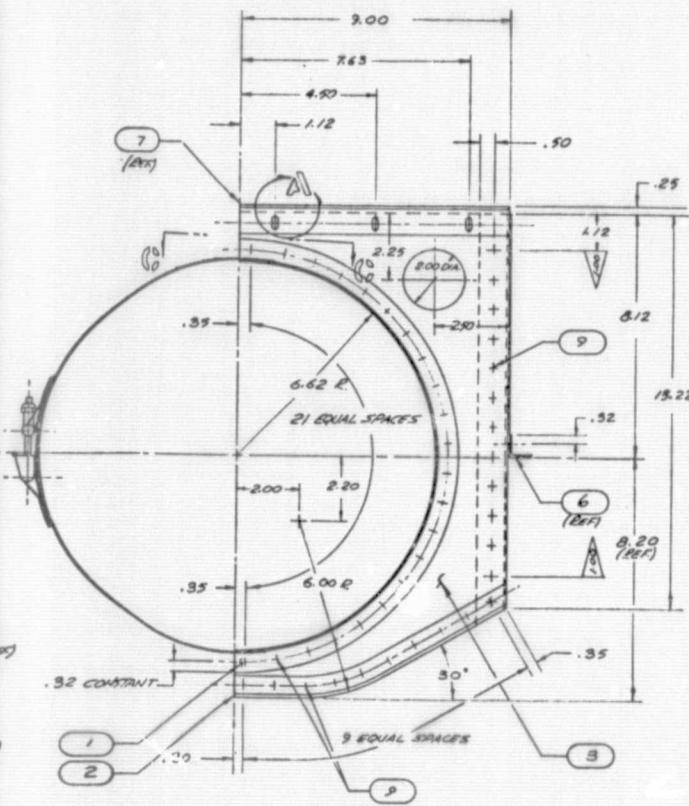
ALL UGLY FRAME



DETAIL 13
SCALE 1/
TYP. 8 PLACES



DETAIL CO H CO
SCALE 1/4
FOR 4 PLACES



Technical drawing of Detail A showing dimensions for Item 7 and Item 3.

Dimensions:

- Item 7: .37, .198, .204, .45, .38, .22, FULL E.
- Item 3: .37, .22
- Other: .198, .204, .45, .38, .22, FULL E.

Annotations:

- SLOT IN ITEM 7 ONLY - .198 Dia
- HOLE TO MATCH IN ITEM 3 WEB
- DETAIL A
- SCALE $\frac{1}{4}$

DETAIL SCALE 1/

B	M520827H4	RIVET			10
114	M520870ADG	RIVETS			7
2	M89325K635125T	CLAMP ASSY	REF ID: QD-100 LOS ANGELES CALIF.		8
2	-13	ANGLE	1818-125 6061-T6 AL	MIL-A-2599G	(3) 7
1	-11	ANGLE	.30 x .80 x .16 6061-T6 AL	MIL-A-2599A	(3) 6
2	-9	ANGLE	1818-125 6061-T6 AL	MIL-A-2599A	(3) 5
1	-7	WEB	.071 6061-T6 AL SIGHT	QO-A-250111	4
2	-5	WEB	.071 6061-T6 AL SIGHT	QO-A-250111	3
2	-3	ANGLE	.30 x .80 x .125	MIL-A-2599A	(3) 2
2	-1	ANGLE	.16 x .44 x .12 6061-T6 AL	MIL-A-2599G	(3) 1
GTY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION ZONE ITEM NO
-501			PARTS LIST		

INTERPRETING PER	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES TOLERANCES ON:	DATE 3.15.1973	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
	FRACTIONS = \pm 1/16	DWN R.B. MAINE			
	DECIMALS: .X = \pm .1	APVD	BRACKET MOUNTING,		
	.XX = \pm .03	APVD	FIXED BED		
	.XXX = \pm .010	ENGRG	TECS		
	ANGLES = \pm 2 DEG	CHER 3/15/73	T-11		
TCCS		APVD	SIZE	CODE IDENT	DRAWING NO
NEXT ASSY	USED ON	CONTR	E		CC-130
APPLICATION	CCA/C/I/FO	APVD	SCALE	V.E. NOTED	REV

FOLDOOUT FRAME B-40

8

7

6

5

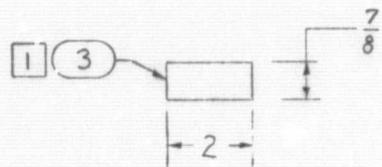
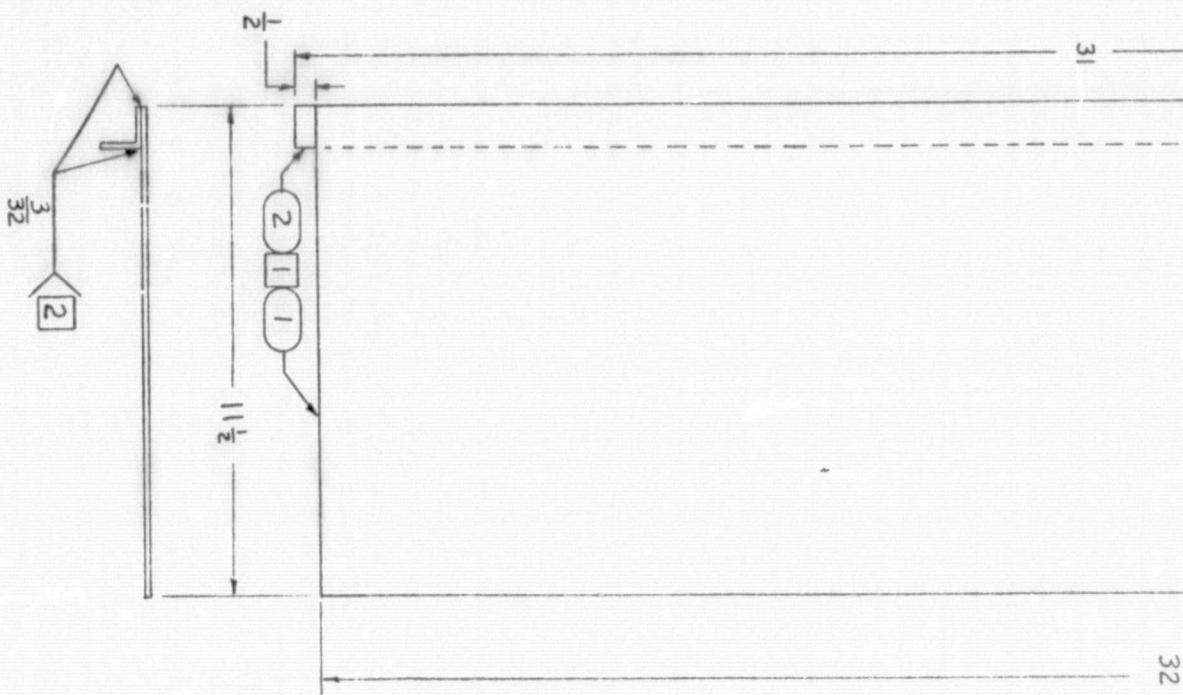
4

D

C

B

A



NOTES:

- [1] IRIDITE ITEMS 1,2 & 3 INDIVIDUALLY PER LAC 0498-010000.
- [2] AFTER IRIDITING, WELD PER LAC 3853 - 050300. INTERRUPTED BEADS, $\frac{1}{4}$ LONG, SPACED 3 INCHES APART.

4

3

2

1

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE LTR	REVISIONS DESCRIPTION	DATE	APPD
-----------------------------	------------------------------	----------	--------------------------	------	------



D

C

B

1		LOOSE LINK	.125 THICK	6061 T6	3
1		ANGLE	1X1X.125	6061 T6	2
1		SHELF	.125 THICK	6061 T6	1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION
					ZONE ITEM NO.

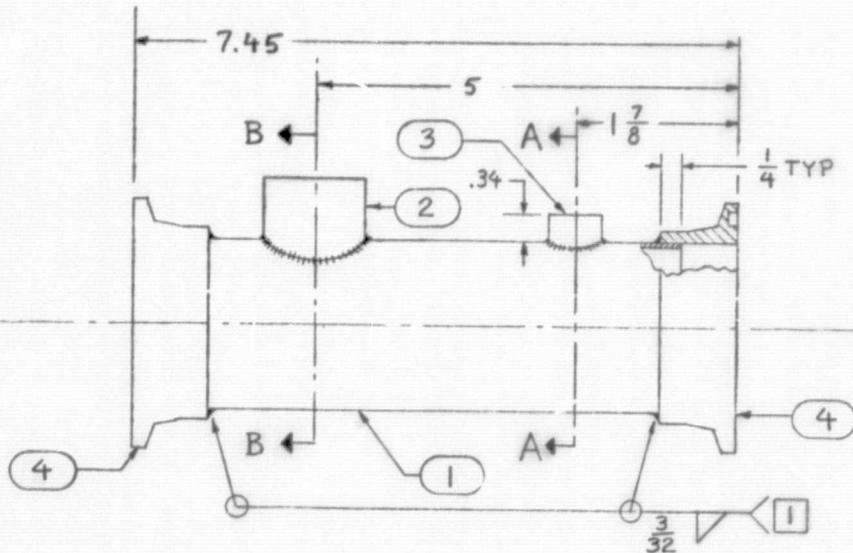
INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON:	DATE 5-10-73	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
		FRACTIONS = $\pm 1/16$	DR aw			
		DECIMALS: .X = $\pm .1$	APPD			
		.XX = $\pm .03$	APPD			
		.XXX = $\pm .010$	ENGRG			
		ANGLES = ± 2 DEG	CHK			
		CONTR	APPD	SIZE	CODE IDENT	DRAWING NO.
NEXT ASSY	USED ON	CCA/CEI	APPD	D		REV
	APPLICATION					CC-131
				SCALE: HALF		1 SHEET OF 1

B-41

FOLDOUT FRAME 2

8 | 7 | 6 | 5 | 4

D

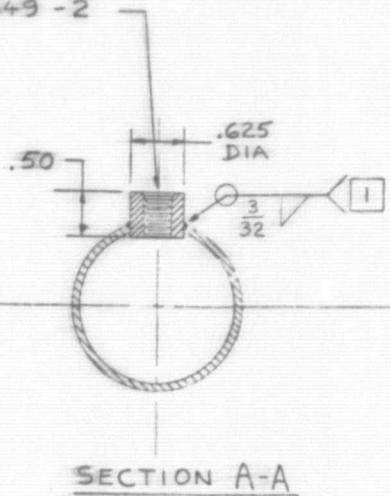


C

B

A

MACHINE PER
MS-33649 - 2



NOTES

- 1. WELD PER LAC 3853-050200. WELD MUST BE VACUUM TIGHT.
- 2. CLEAN PER LAC 0170 AFTER ALL MFG. OPERATIONS & PENETRANT WELD INSPECTION HAVE BEEN COMPLETED.

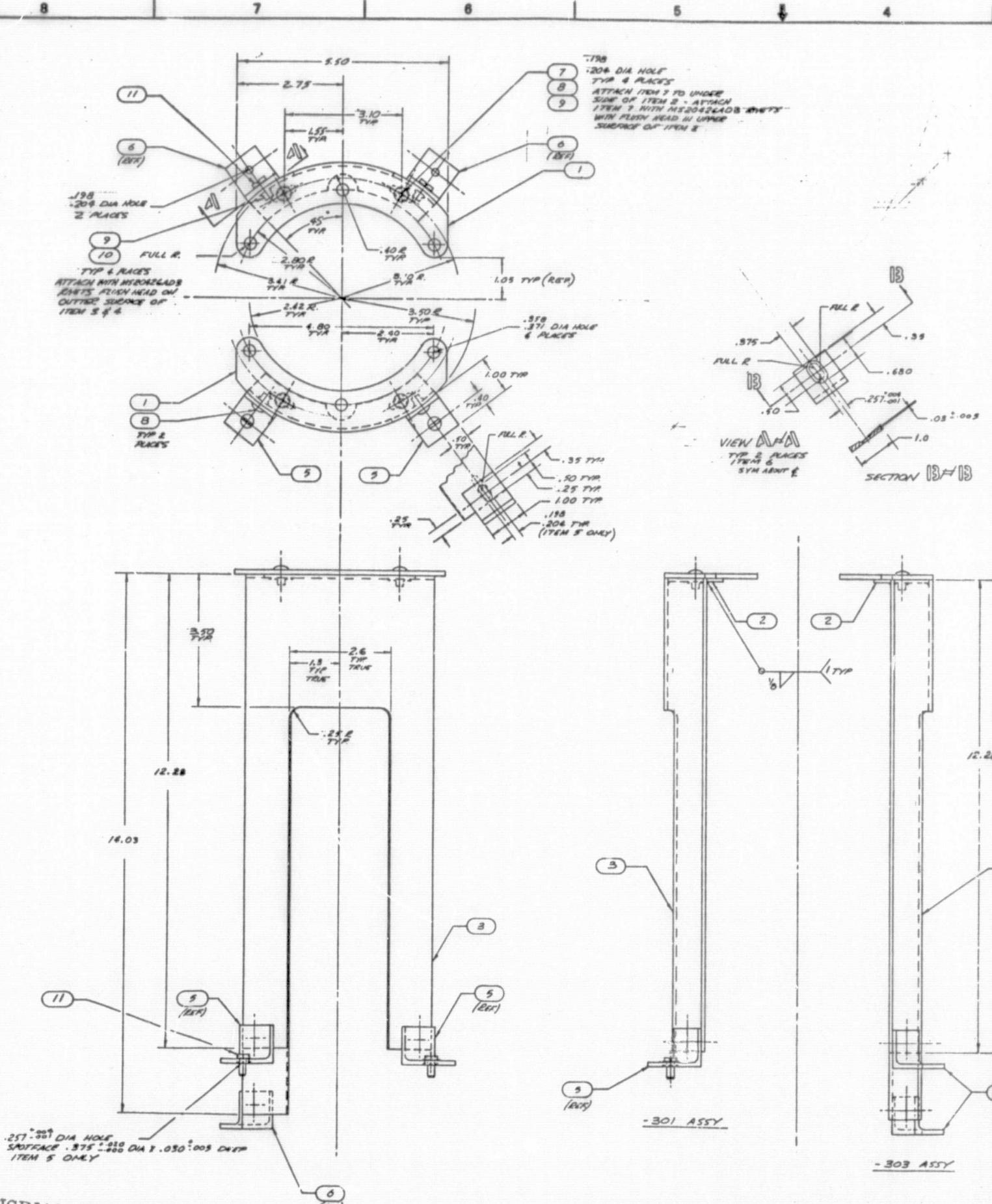
5	4	3	2	1
				REVISIONS DESCRIPTION
				ZONE LTR
				DATE APPD
LIMITED CALENDAR LIFE LIMITED OPERATING LIFE				

SECTION A-A

SECTION BB

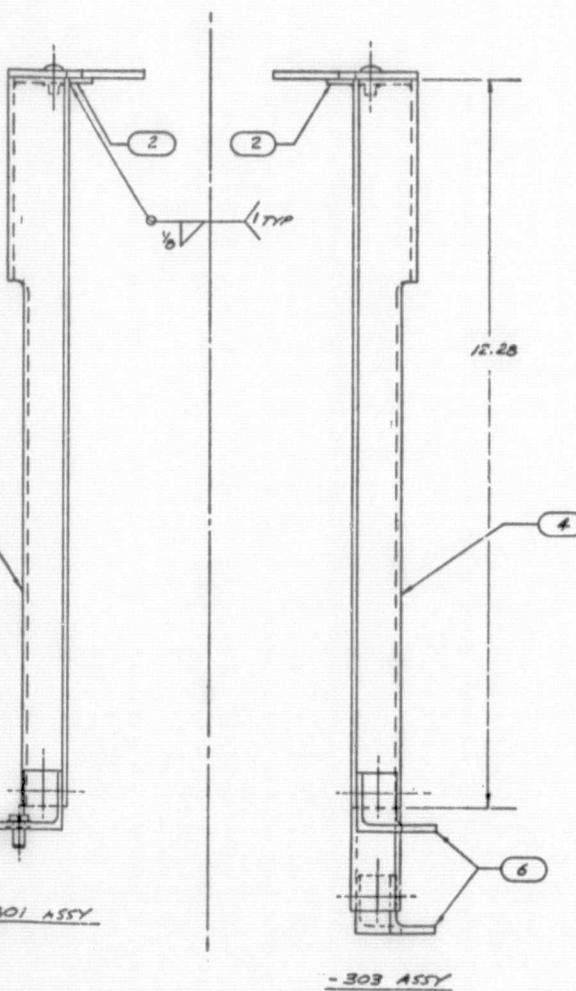
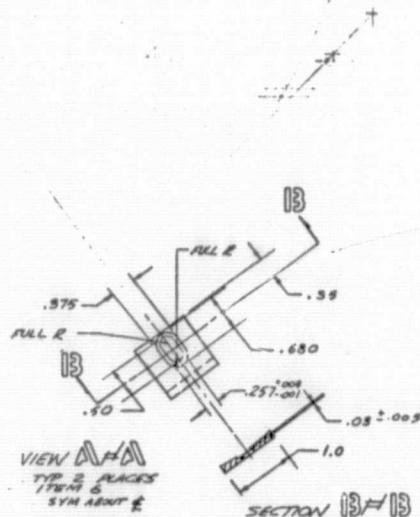
D
C
B
A

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.	
2			GROOVED TUBE FLANGE MFM5703-A-200		AEROQUIP/MARSHAL 6061		4	
1			BOSS	.625 DIA BAR	6061 T6		3	
1			BOSS	1 1/4 DIA. BAR	6061 T6		2	
1			TUBE	2 O.D. X .083 W	6061 T6		1	
PARTS LIST								
INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = ± 1/16 DECIMALS: .X = ± .1 .XX = ± .03 .XXX = ± .010 ANGLES = ± 2 DEG		DATE 5-14-73	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
				DR Aw				
				APPD	DUCT, VACUUM - TO - VALVE			
				APPD				
				ENGRG	TCCS			
				CHK PB. Mar 5-16-73				
				APPD	SIZE	CODE IDENT	DRAWING NO.	REV
				CONTR	D	-	CC-132	-
NEXT ASSY APPLICATION		USED ON APPLICATION		APPD	SCALE FULL	SHEET 1 OF 1		



REVISIONS			
ZONE	ltr	DESCRIPTION	DATE

798
 .204 DIA. HOLE
 TYPE 6 PLATES
 ATTACH ITEM 7 TO UNDER
 SIDE OF ITEM 2 - ATTACH
 ITEM 7 WITH MS20426AD3 BOLTS
 WITH FLUSH HEAD IN UPPER
 SURFACE OF ITEM 8

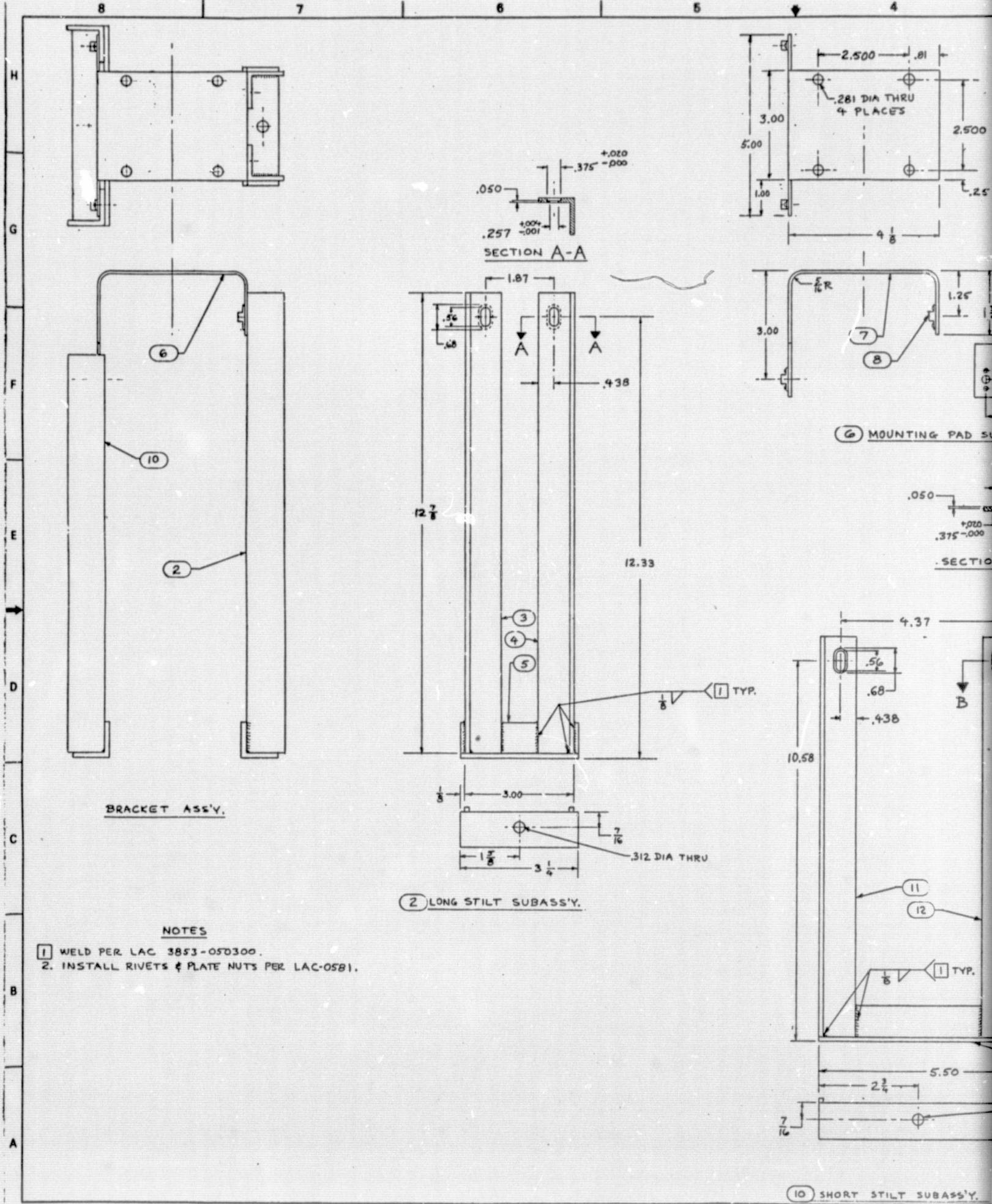


INSTALL MECHANICAL FASTENERS PER LAC-0581
 8 PER LAC-129,
 10 PER LAC-3053-050300

2	2	OCT 7900-10-8-3	CAPTIVE SCREW	DEUTSCHE FASCHNER CORP. L.A. CALIF.	11
2	2	LS8835-3	NUT PLATE		10
8	8	MS20426AD3	EMER		9
2	4	LS8708T-8-3	SCREW		8
2	2	LS8837-8	NUT PLATE		7
2		-11 FOOT	AL ANGLE	MC-A-25994	6
	2	-9 FOOT	AL ANGLE	MR-A-25994	5
1		-7 LEG	AL SHEET	QQ-A-250/11	4
	1	-5 LEG	AL SHEET	QQ-A-250/11	3
1	1	-3 SUPPORT	AL SHEET	QQ-A-250/11	2
1	1	-1 PLATE	AL SHEET	QQ-A-250/11	1
QTY REQD	QTY REQD	CODE IDENT	PART OR IDENTIFYING NO	MATERIAL DESCRIPT. ION OR NOTE	MATERIAL SPECIFICATION
-303	-301			PARTS LIST	ZONE ITEM NO

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS $\pm 1/16$ DECIMALS $\pm .01$ $.XXX = \pm .03$ $.XXX = \pm .010$ ANGLES $\pm 2^\circ$	DATE 5-15-78 DWY 18 MAINE APVD	LOCKHEED MISSILES & SPACE COMPANY INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BUNNYVALE, CALIFORNIA
		ENGRG CHER 307-1005-5-14-78	BRACKET ASSY. VACUUM VALVE TCCS	
		APVD		
NEXT ASSY USED ON APPLICATION	CONTR CCA/C1/FD	DRAWING NO E CC-133 REV	SCALE 1:1 SHEET 1 OF 1	

FOLDOUT FRAME B-43



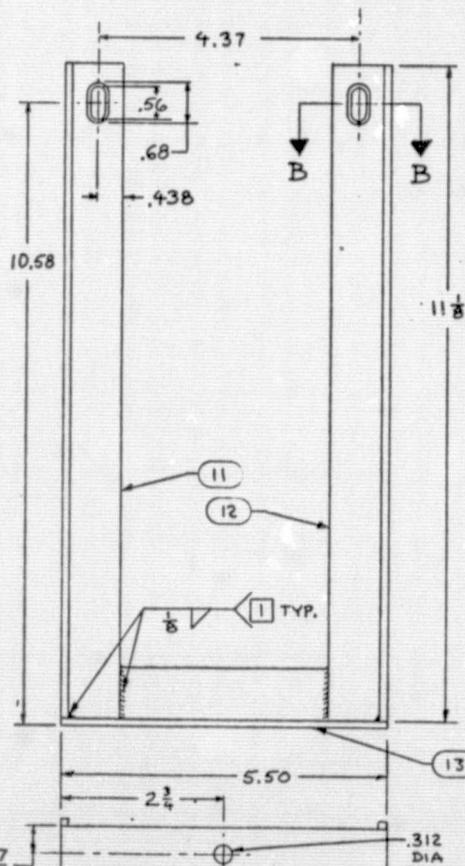
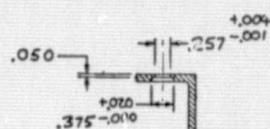
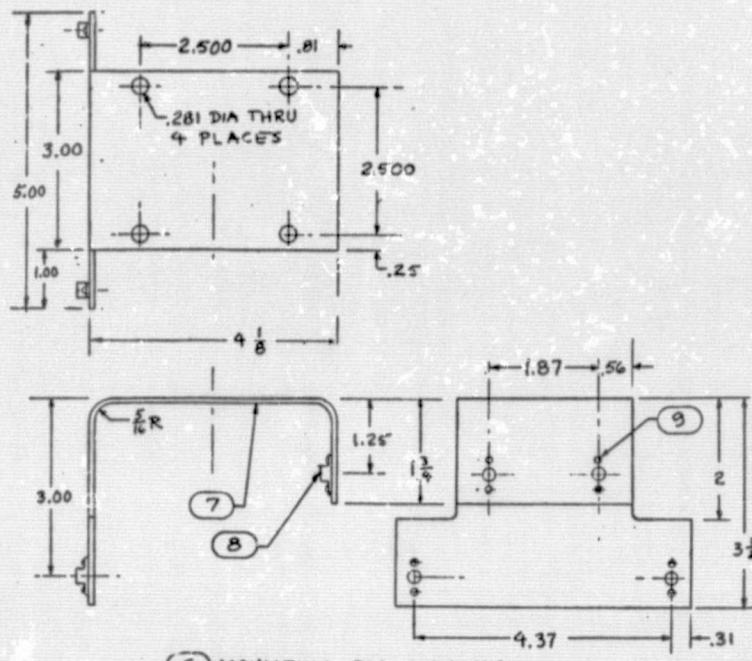
5

4

3

2

1



(b) SHORT STILT SUBASS'Y.

REVISIONS		DATE	APVD
ZONE	LTR		

1	FOOT			13
1	RIGHT SHORT STILT			12
1	LEFT SHORT STILT	1 X 1 X $\frac{1}{8}$ ANGLE	6061-T6	11
1	SHORT STILT SUBASS'Y.	ITEMS 11,12,13		10
8	MS 20426 AD3	RIVET, FLUSH ALUM	Z117-T4	9
4	LS 8837-3	PLATE NUT		8
1	MTG. PAD	.080 SHEET	6061-T6	7
1	MTG. PAD SU 155'Y.	ITEMS 7,8,9		6
1	PEDESTAL			5
1	RIGHT LONG STILT			4
1	LEFT LONG STILT	1 X 1 X $\frac{1}{8}$ ANGLE	6061-T6	3
1	LONG STILT SUBASS'Y.	ITEM 3,4,5		2
1	BRKT. ASS'Y.	ITEMS 2,6,10		
QTY	CODE	PART OR IDENT	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
RECD	IDENT	IDENTIFYING NO	DESCRIPTION OR NOTE	ZONE ITEM NO

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON:		DATE 7-12-73		LOCKHEED MISSILES & SPACE COMPANY, INC.	
		FRACTIONS $\pm \frac{1}{16}$		DWN (in)		A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BUNNYNSALE, CALIFORNIA	
		DECIMALS: .X = $\pm .03$		APVD		APVD	
		.XXX = $\pm .010$		ENRG		BLOWER SOLENOID VALVE	
		ANGLES = ± 2 DEG		CHKR		TCCS	
		CONTR		APVD		SIZE CODE IDENT DRAWING NO	
		APPLICATION		E		REV CC-134	
		CCA/C1/FD		SCALE 1:1		SHEET 1 OF 1	

B-44

FOLDOUT FRAME

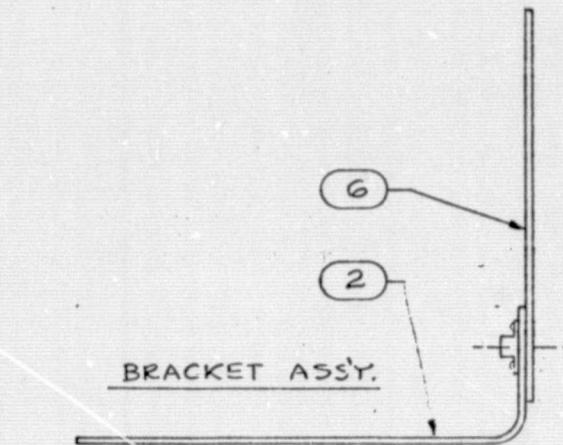
8

7

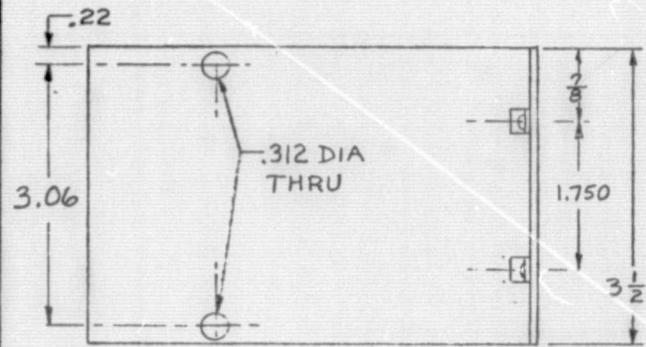
6

5

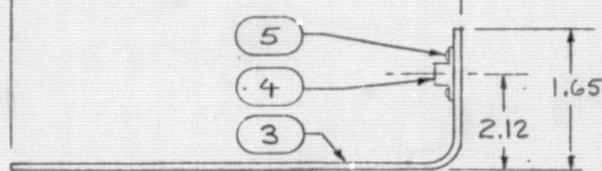
D



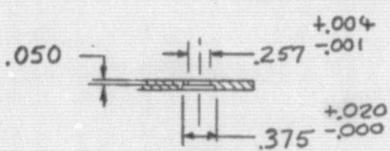
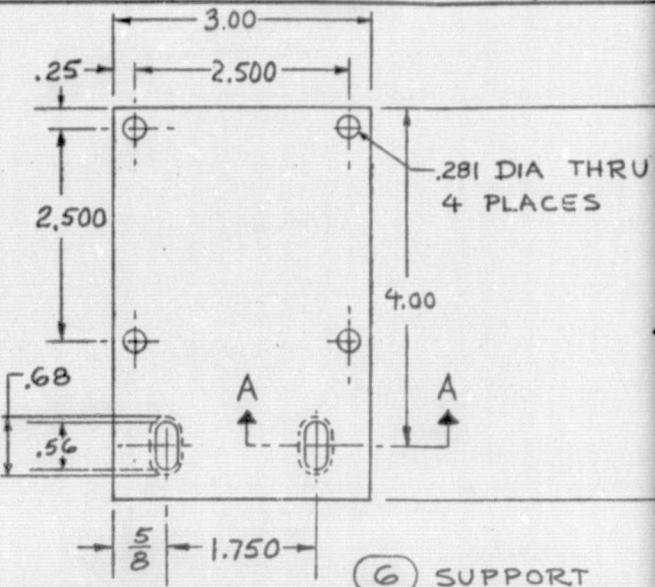
C



B



(2) BASE SUBASSY.



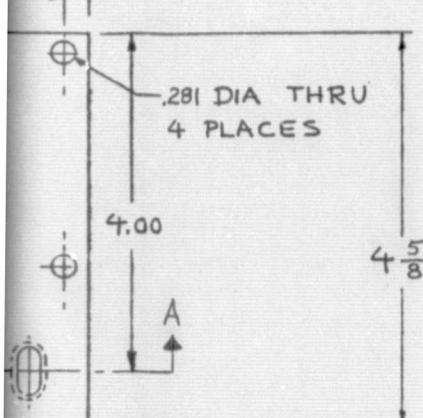
A

NOTES

1. INSTALL RIVETS & PLATE NUTS PER LAC-0581.

5 4 3 2 1

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPD
-----------------------------	------------------------------	------	-----	--------------------------	------	------



(6) SUPPORT

+.004
-.001
-.001
+.020
.375 -.000

ON A-A

D

C

B

1		SUPPORT	.125 SHEET	6061 T6 ALUM.	6		
4	MS 20426 AD3	RIVET, FLUSH	ALUM.	2117-T4	5		
2	LS-8837-3	PLATE NUT			4		
1		BASE	.125 SHEET	6061 T6 ALUM.	3		
1		BASE SUBASSY.	ITEMS 3,4,5		2		
1		BRKT, ASSY.	ITEMS 2,6				
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.

PARTS LIST

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: $.X = \pm .1$ $.XX = \pm .03$ $.XXX = \pm .010$ ANGLES = ± 2 DEG		DATE 7-30-73	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
		DR Aw		APPD	BRACKET - PRESORB SOLENOID VALVE		
				APPD	TCCS		
		ENGRC		CHK			
				APPD	SIZE	CODE IDENT	DRAWING NO.
					D		CC-135
		CONTR		APPD	SCALE FULL		REV
NEXT ASSY	USED ON	CCA/CEI					-
APPLICATION							SHEET 1 OF 1

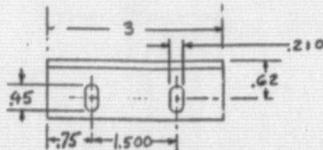
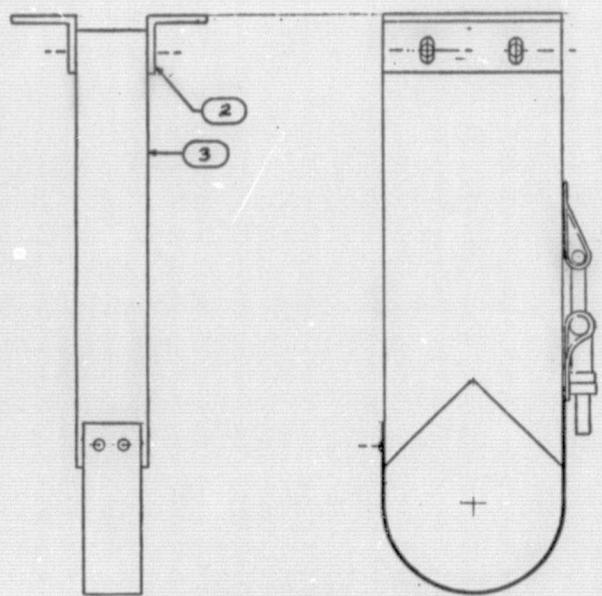
A

B-45

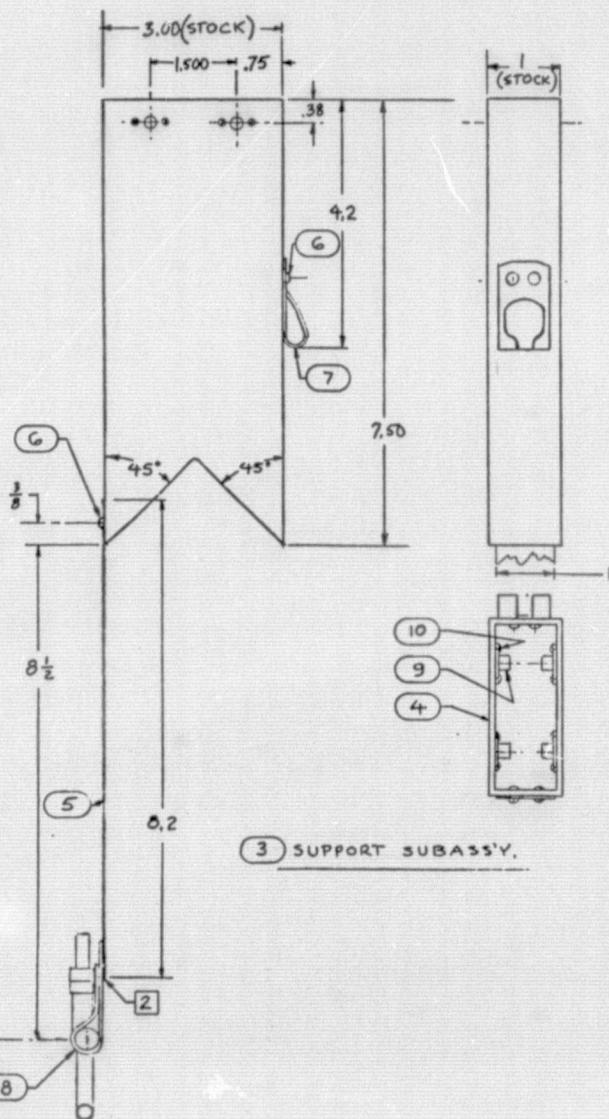
FOLDOUT FRAME 2

8 7 6 5 4

H
G
F
E
D
C
B
A



FINAL ASS'Y.

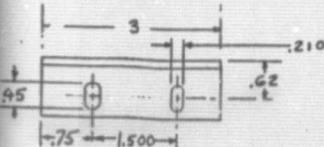


NOTES

1. INSTALL RIVETS & PLATE NUTS PER LAC-0581.
2. RIVET (USING ITEM 6) OR SPOTWELD ITEM 8 TO ITEM 5.

5 4 3 2 1

REVISIONS		DATE	APVD
ZONE	LTR	DESCRIPTION	



(2) BASE

NOTES

& PLATE NUTS PER

) OR SPOTWELD ITEM 8

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO	PARTS LIST		
								10	9	8
8	MS2042GAD3	RIVET, FLUSH	ALUM.							
4	LS-8837-3	PLATE NUT								
1	FURNISHED	MARSHAL CLAMP								
1	FURNISHED	MARSHAL CLAMP								
6	MS 20615-3M	RIVET $\frac{3}{16}$ SHANK MONEL								
1		STRAP	.015 TO .020 STAINLESS STEEL							
1	OB-030-7125000	SUPPORT	3/8 X .083 RECT. TUBE	6061-T6						
1		SUPPORT SUBASSY.		ITEMS						
2		BASE	1 X 1 X $\frac{1}{8}$ ANGLE	6061-T6						
1		FINAL ASSY.	ITEMS 2, 3							

INTERPRET DNG PER	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS: $\pm 1/16$ DECIMALS: $\pm .03$ $\pm .003$ $\pm .010$ ANGLES: ± 2 DEG	DATE 5-1-73 DWN J.W. APVD	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION BURLINGAME, CALIFORNIA
			BRACKET, DELIVERY DUCT
			TCC 5
NEXT ASSY	USED ON	SIZE	CODE IDENT DRAWING NO REV
CONTR	APPLICATION	E	CC-136 -
	CCA/C/FO	SCALE FULL	1 SHEET / OF 1

8

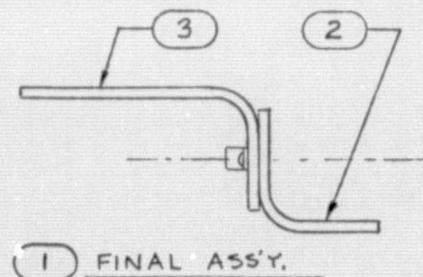
7

6

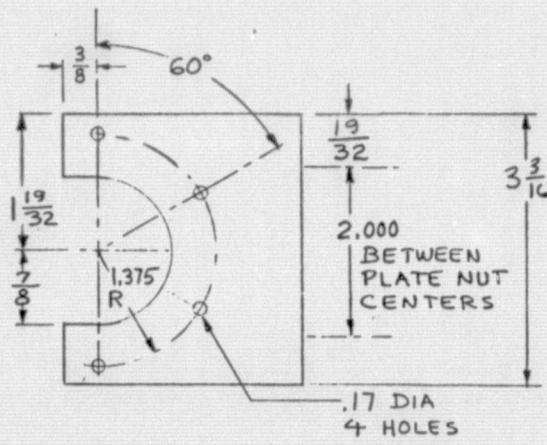
5

4

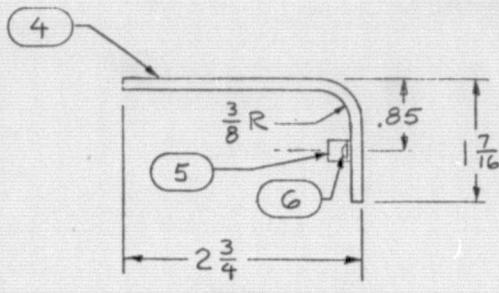
D



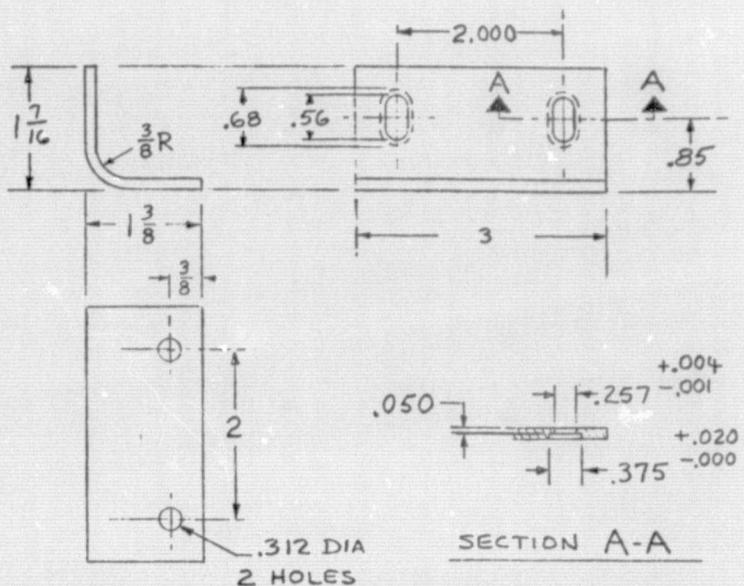
C



B



A



5

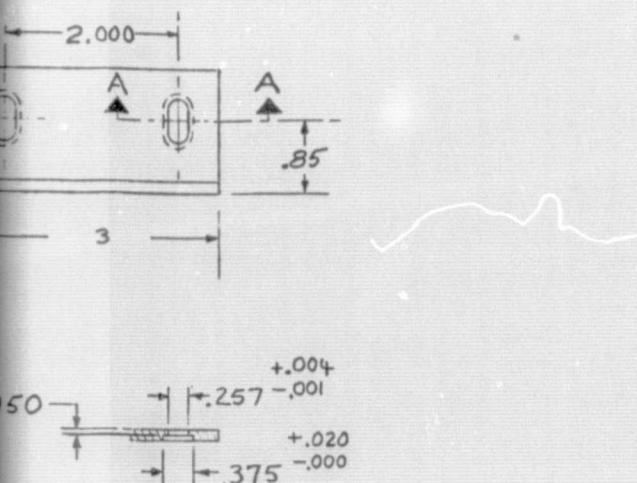
4

3

2

1

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPD
-----------------------	------------------------	------	-----	-----------------------	------	------



SECTION A-A

4	MS20426AD3	FLUSH HEAD RIVET	ALUMINUM				6
2	LS 8837-3	PLATE NUT					5
1		SUPPORT	.125 SHEET	6061 T6			4
1		SUPPORT SUB.	ITEMS 4,5,6				3
1		BASE	.125 SHEET	6061 T6			2
1		FINAL ASS'Y.	ITEMS 2,3				1
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.

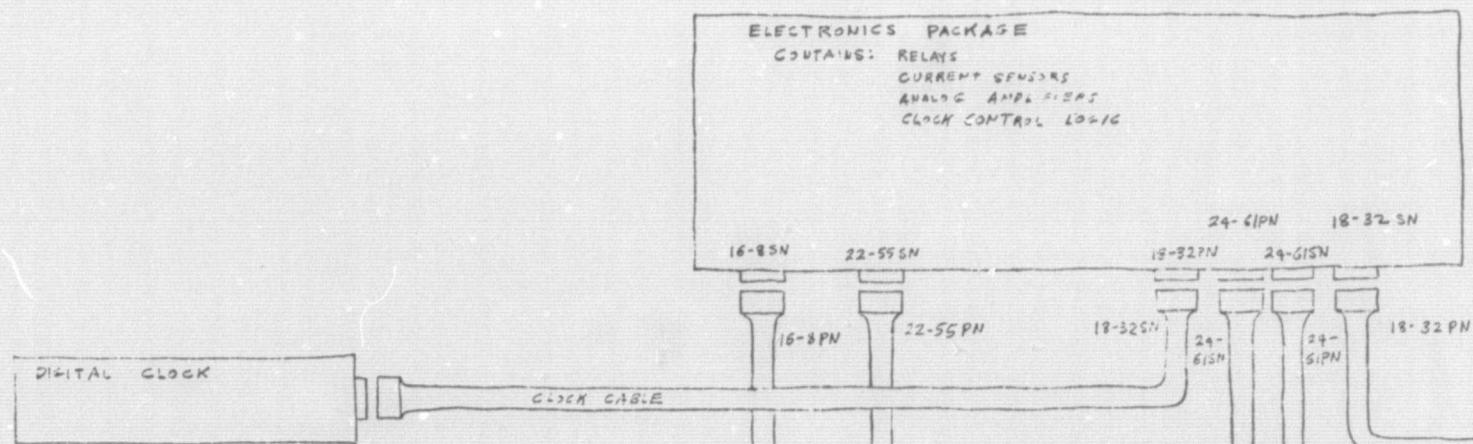
PARTS LIST

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON:		DATE 8-2-73		LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA	
		FRACTIONS = $\pm 1/16$		DR CW			
		DECIMALS: $.X = \pm .1$		APPD			
		$.XX = \pm .03$		APPD			
		$.XXX = \pm .010$		ENGRC			
		ANGLES = ± 2 DEG		CHK			
NEXT ASSY	USED ON	CONTR	APPD	SIZE	CODE IDENT	DRAWING NO.	REV
APPLICATION	CC/CEI	APPD		D		CC-137	-
				SCALE	FULL		SHEET 1 OF 1

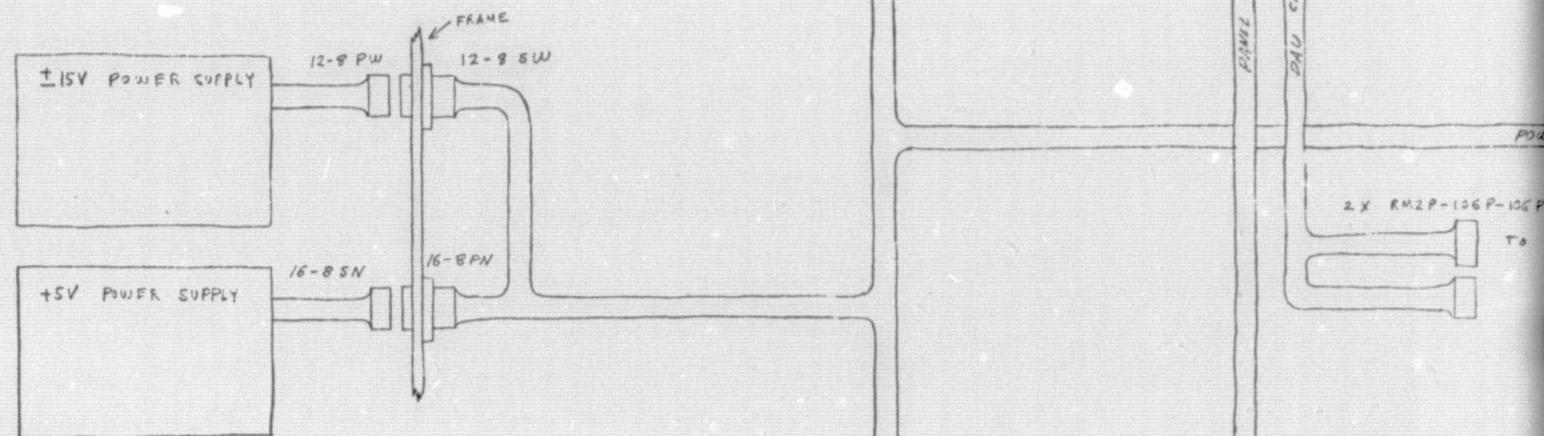
B-47

FOLDOUT FRAME

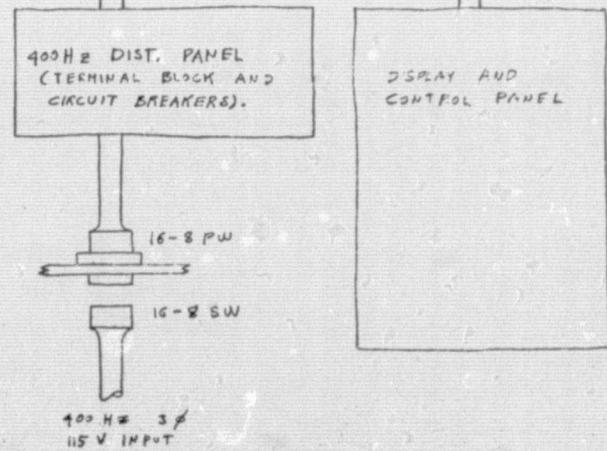
D



C



B



A

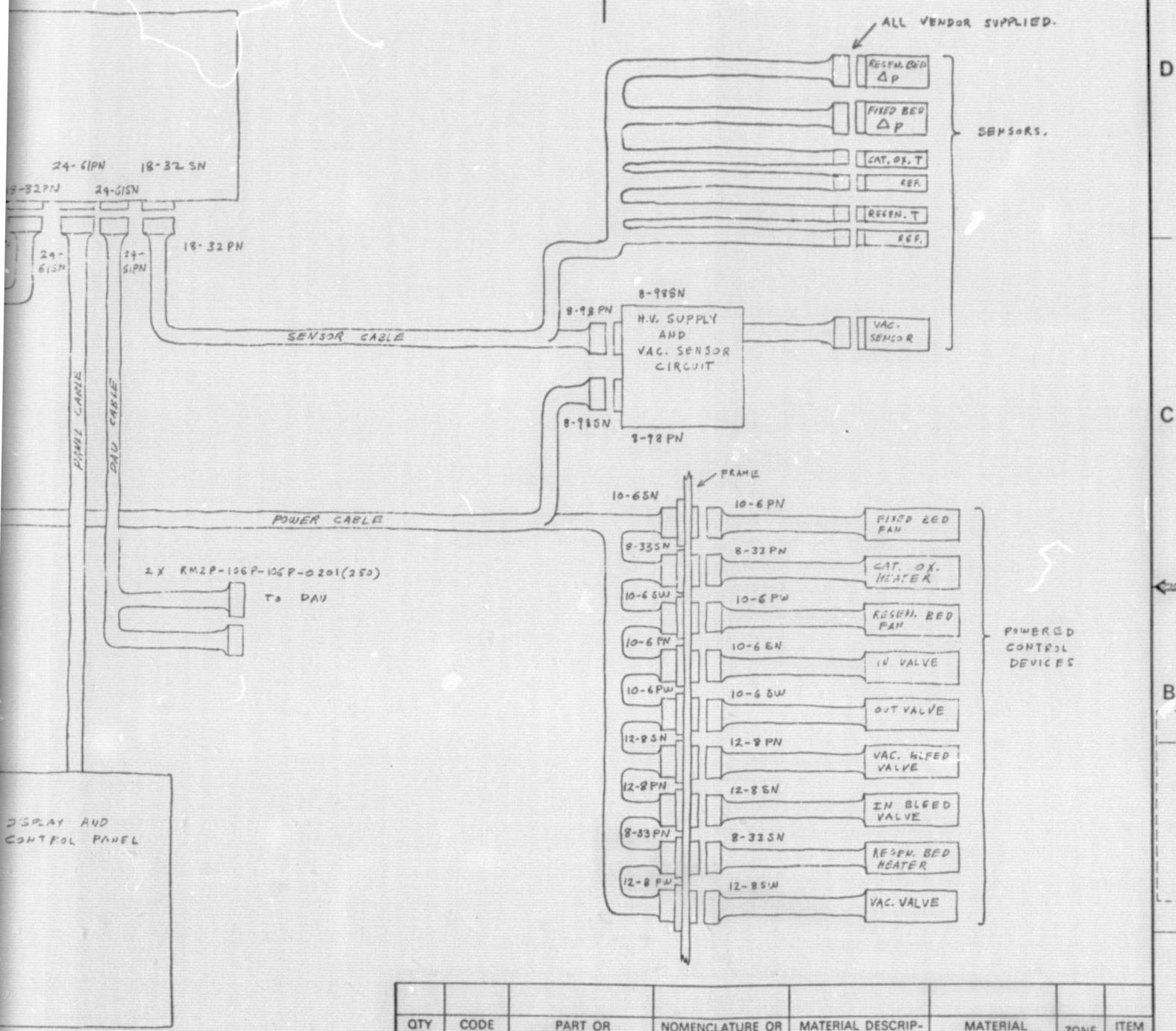
4

3

2

1

		REVISIONS			
LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	LTR	DESCRIPTION	DATE APPD



QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
-------------	---------------	----------------------------	--------------------------------	-----------------------------------	---------------------------	------	-------------

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 2/15/73 DR R.S. Lira	PARTS LIST LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
		APPD	TCCS CABLE LAYOUT			
		APPD				
		ENGRG				
		CHK				
		APPD	SIZE	CODE IDENT	DRAWING NO.	
	NEXT ASSY	CONTR	D		CC-201	
	USED ON					
	APPLICATION	CCA/CEI	APPD	SCALE	SHEET 1 OF 1	

B-48

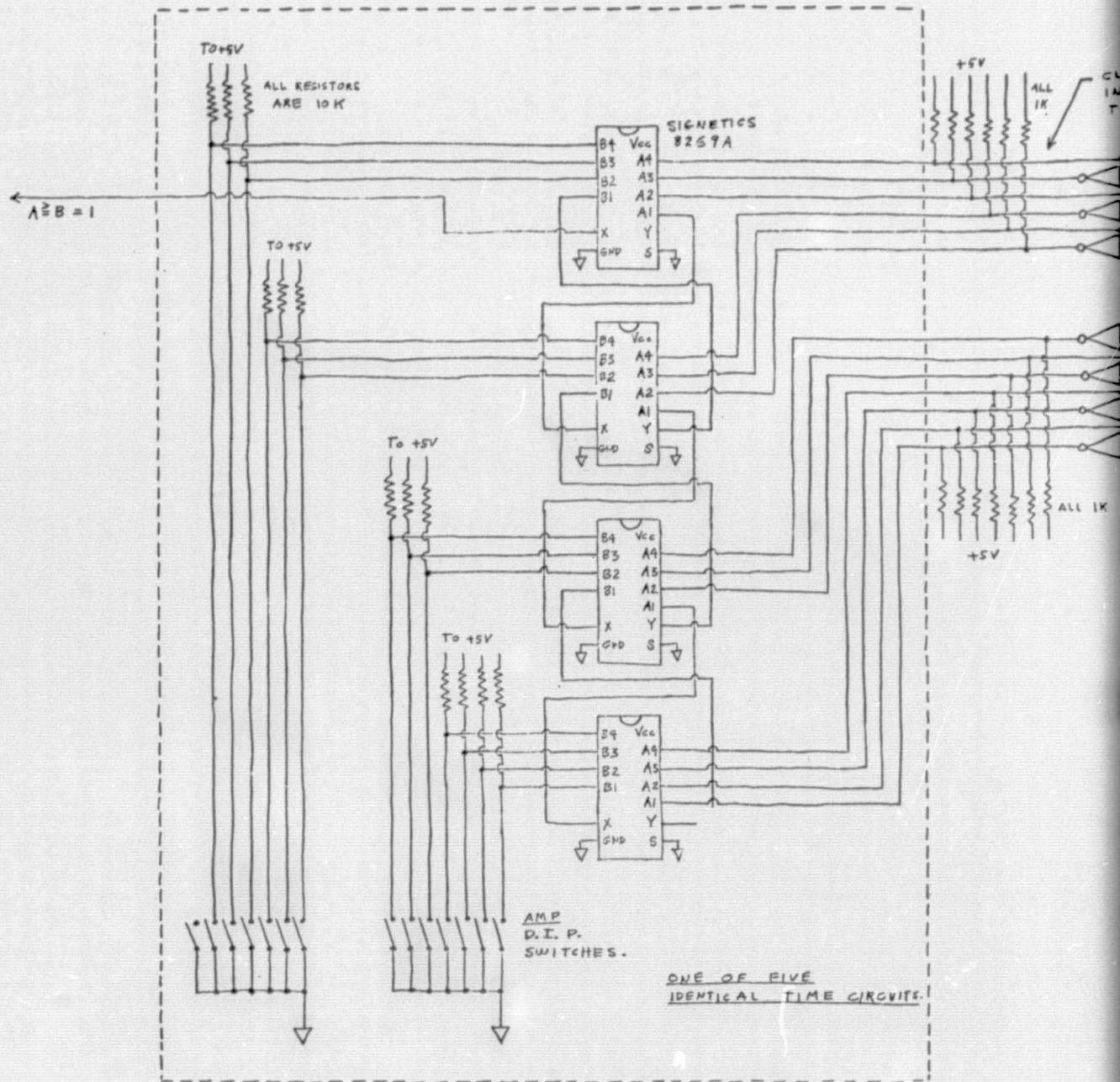
FOLDOUT FRAME

D

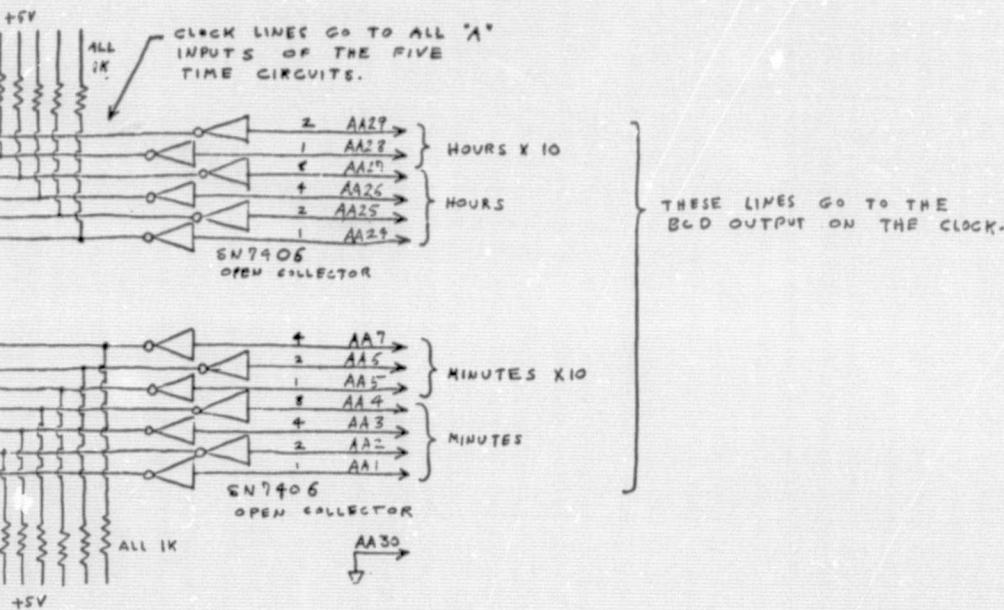
C

B

A



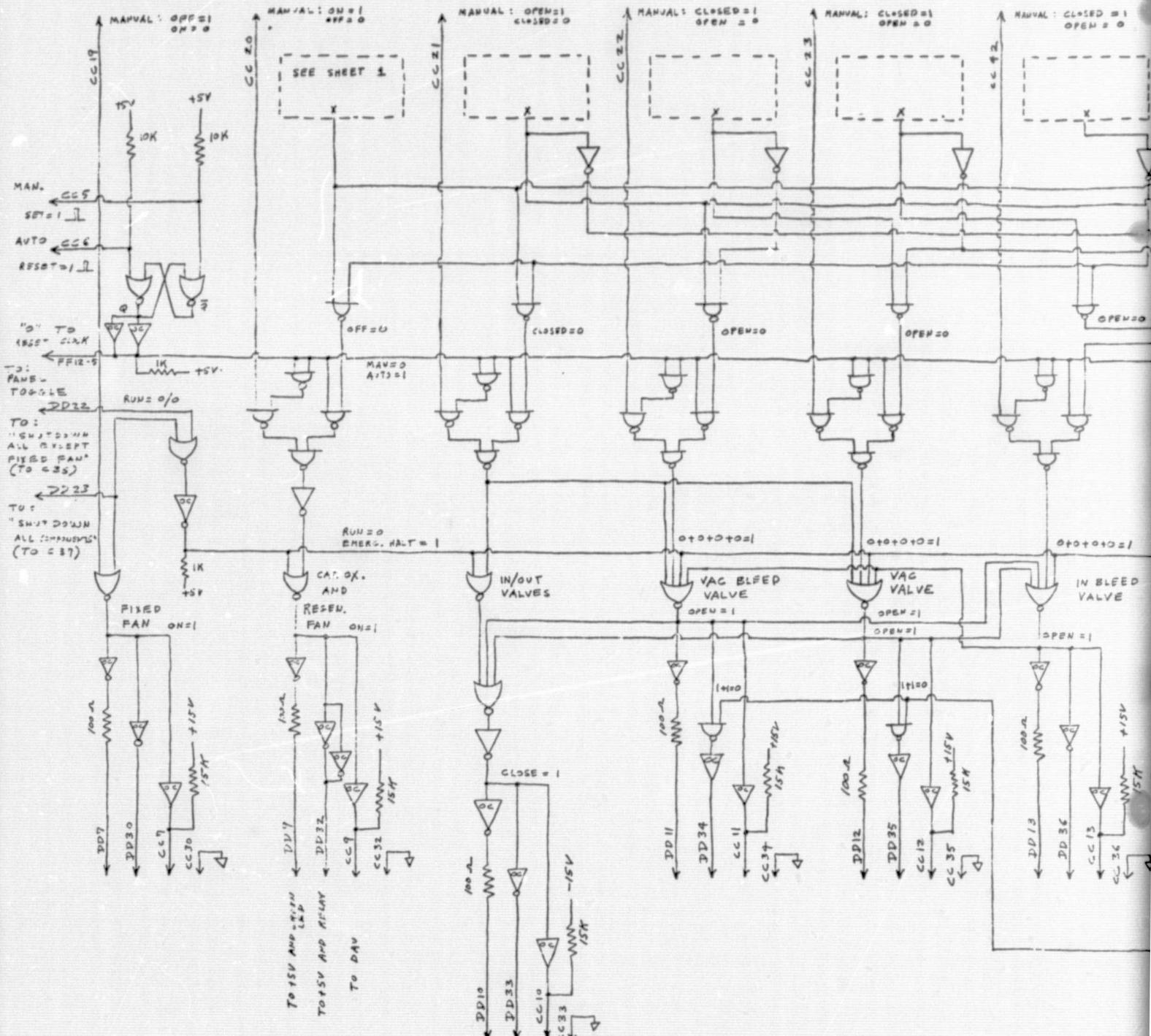
LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE/LTR	REVISIONS DESCRIPTION	DATE	APPD



CIRCUITS.

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 3/2/73 DR R.S. Luce APPD APPD ENGRG CHK APPD CONTR APPD	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
NEXT ASSY	USED ON		TCCS CONTROLLER (SHEET 1 OF 2)			
APPLICATION		CCA/CEI	SIZE D	CODE IDENT	DRAWING NO. CC-202	REV -
			SCALE		SHEET 1 OF 2	



FORM LMSAC-1512D-7 PRINTED ON LMSAC CODE 1

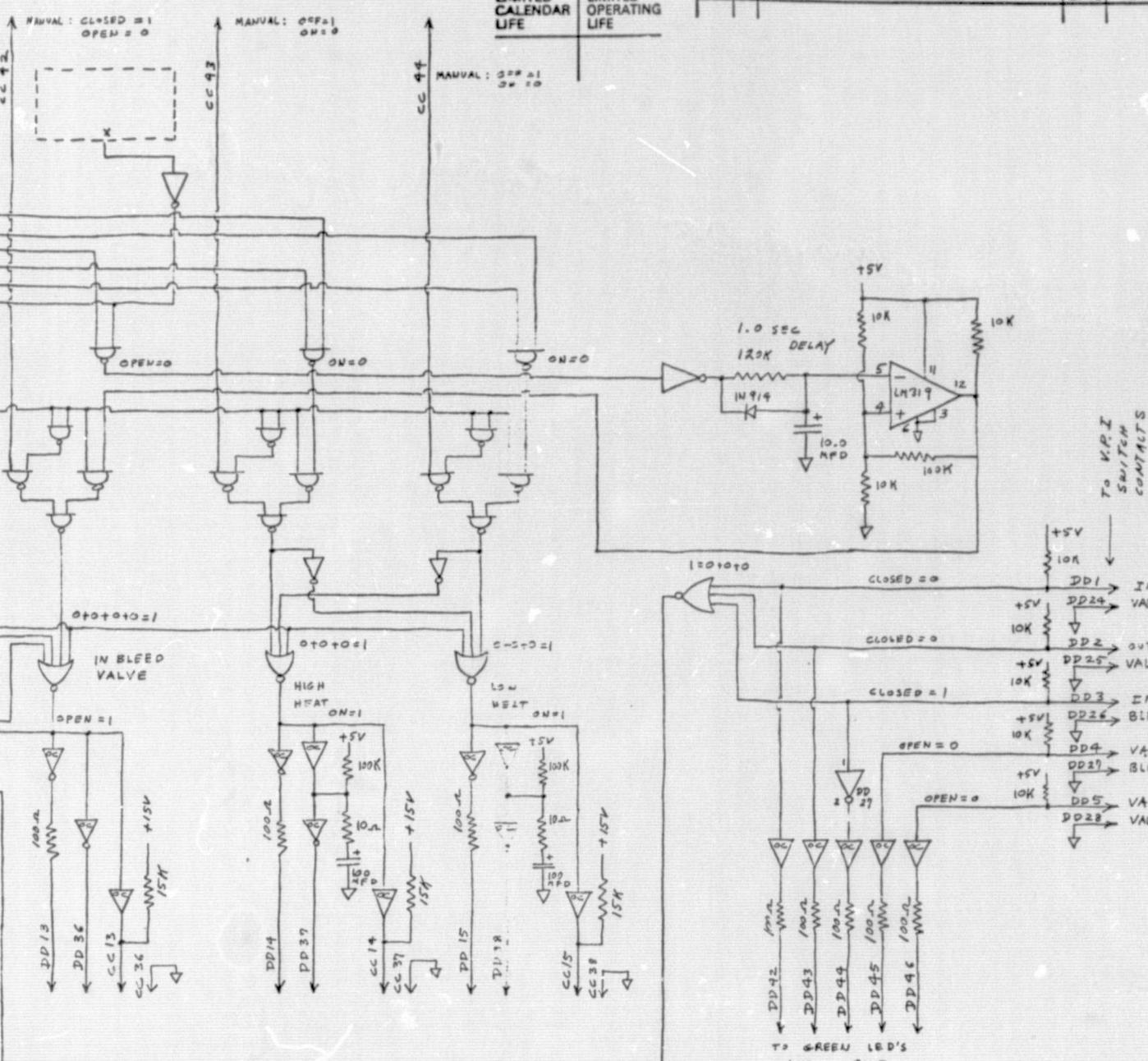
ORIGINAL PAGE IS
OF POOR QUALITY

FOLDOUT FRAME

REVISIONS
DESCRIPTION

DATE APPD

ZONELTR

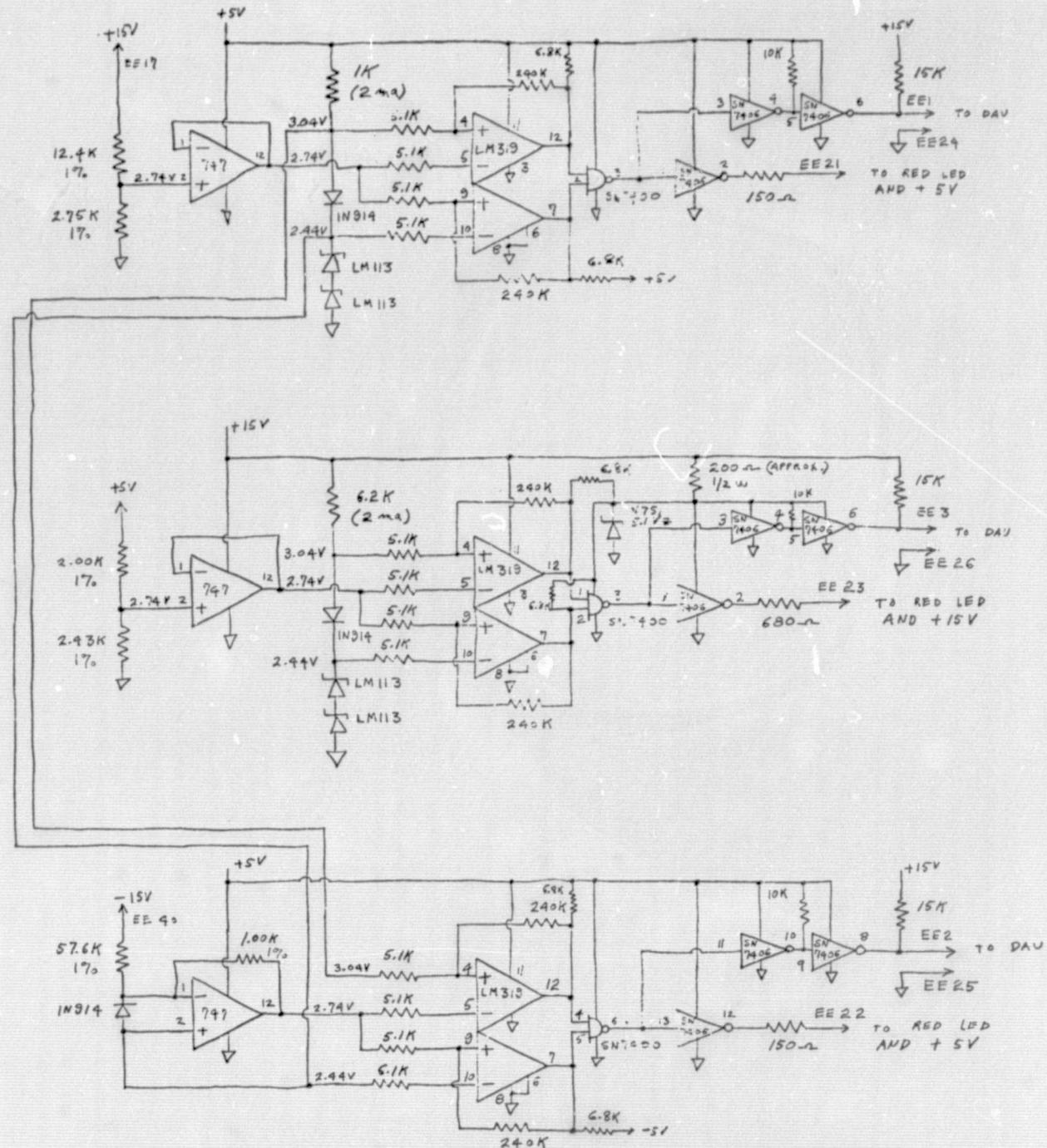


QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
-------------	---------------	----------------------------	--------------------------------	-----------------------------------	---------------------------	------	-------------

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 3/2/73 DR <i>[Signature]</i>	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
NEXT ASSY	USED ON	CONTR	APPD	TCCS CONTROLLER (SHEET 2 of 2)		REV -	
APPLICATION	CCA/CEI	APPD	SIZE D	CODE IDENT -	SCALE -	SHEET 2 of 2	

B-50

FOLDOUT FRAME 2



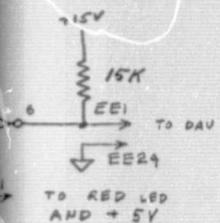
4

3

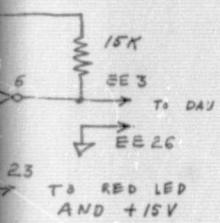
2

1

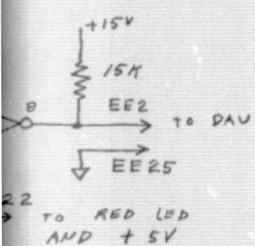
LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPD
-----------------------------	------------------------------	------	-----	--------------------------	------	------



D



C



B

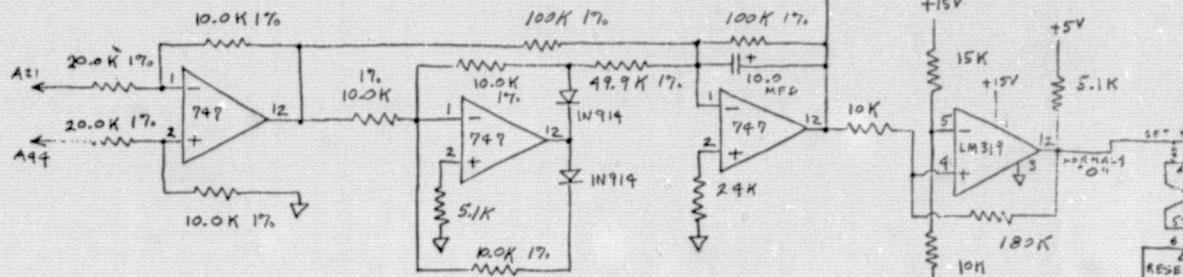
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
PARTS LIST							
INTERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = ± 1/16 DECIMALS: .X = ± .1 .X.X = ± .03 .XXX = ± .010 ANGLES = ± 2 DEG	DATE 3/2/73 DR R. L. Lee	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA	TCCS POWER SUPPLY MONITOR CIRCUITS			
NEXT ASSY	USED ON	CONTR	APPD				
APPLICATION	CCA/CEI	APPD	APPD	SIZE D	CODE IDENT CC - 203	DRAWING NO. REV -	SCALE SHEET 1 OF 1

B-51

FOLDOUT FRAME

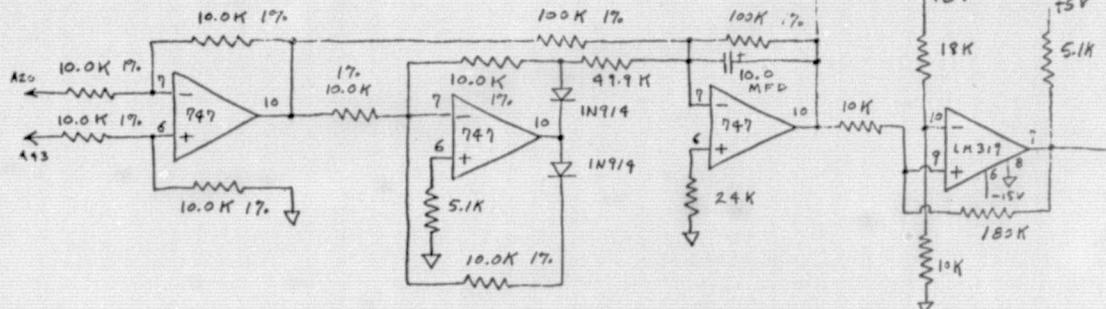
D

400 Hz
LINE
SIMPSON
MODEL 186
CURRENT
TRANSFORMER



C

400 Hz
LINE
SIMPSON
MODEL 186
CURRENT
TRANSFORMER



B

ORIGINAL PAGE IS
OF POOR QUALITY

NOTE:

REMAINING CKTS FOR VALVES AND FANS
TO BE IDENTICAL, EXCEPT NO LINES TO DAS
OR PANEL METERS. TEMP. CKTS SHOWN
ON SEPARATE DRAWING.

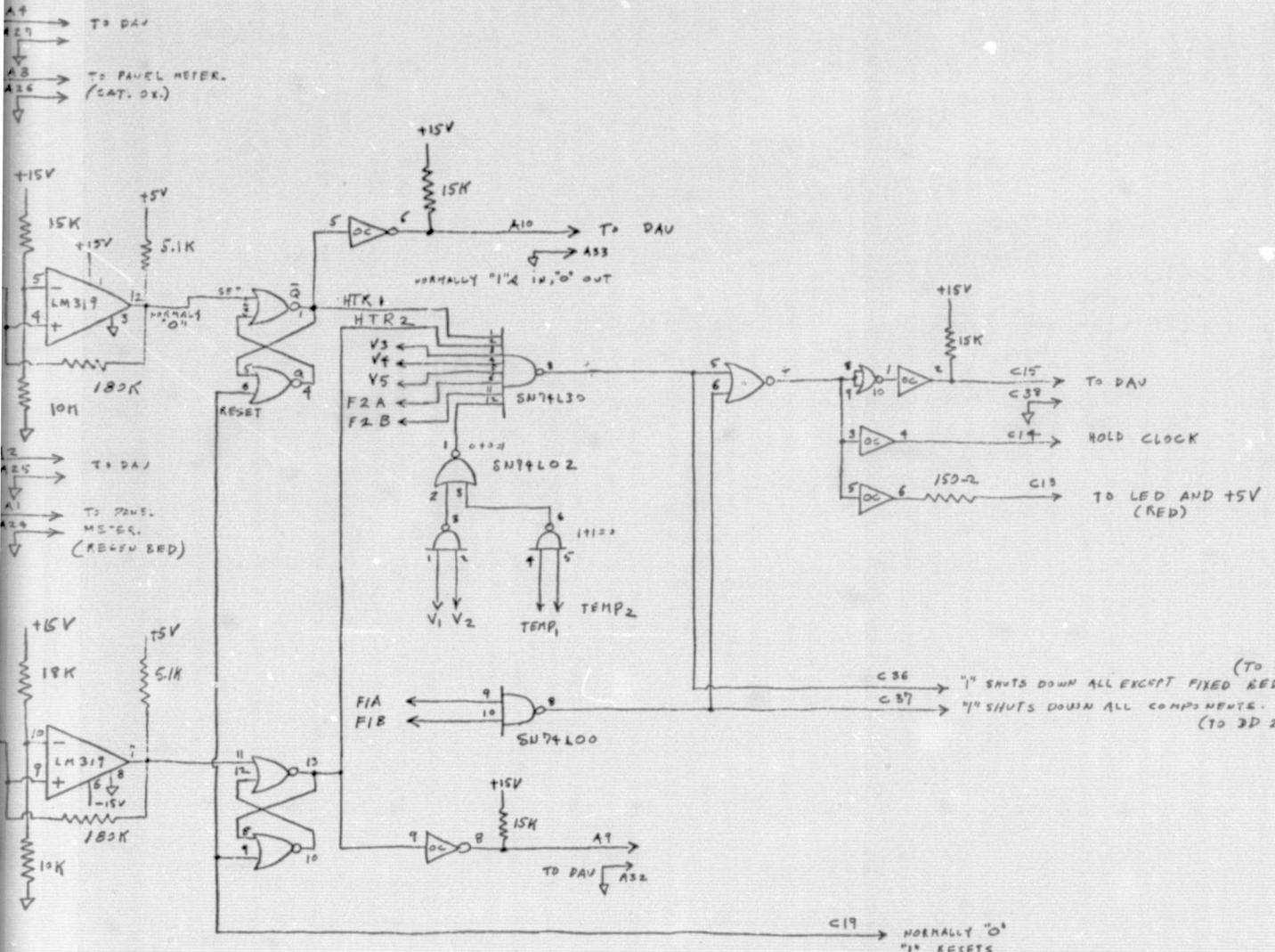
4

3

2

1

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	REVISIONS DESCRIPTION	DATE	APPD
-----------------------------	------------------------------	------	--------------------------	------	------



VALVES AND FANS
PT NO LINES TO PAU
P. CHTS SHWN N

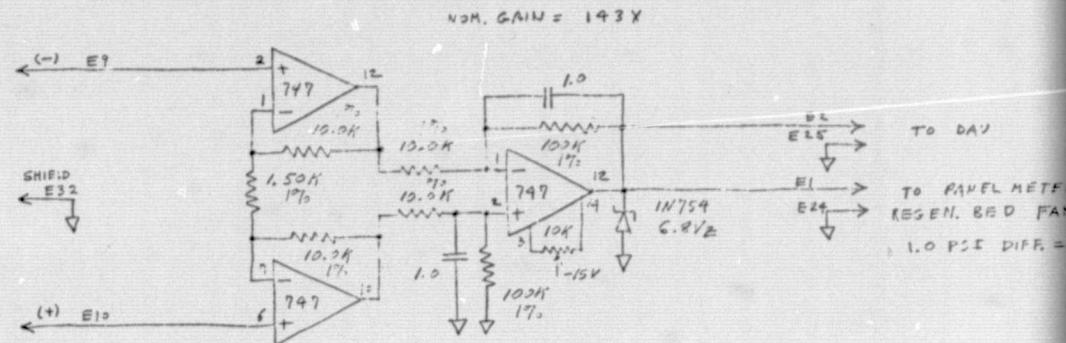
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
-------------	---------------	----------------------------	--------------------------------	-----------------------------------	---------------------------	------	-------------

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES.TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	PARTS LIST		LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
			DATE 3/2/93 DR R S Line	APPD	TCCS OVER-CURRENT, OVER TEMP. SHUTDOWN CIRCUITS			A
				APPD				
				ENRG				
				CHK				
				APPD	SIZE	CODE IDENT	DRAWING NO.	REV
NEXT ASSY	USED ON	CONTR			D		CC-204	-
APPLICATION	CCA/CEI	APPD			SCALE		SHEET 1 OF 1	

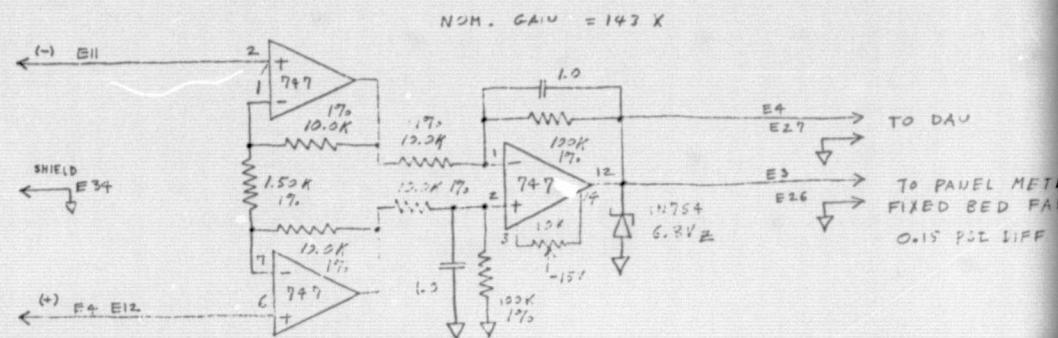
B-52

FOLDOUT FRAME

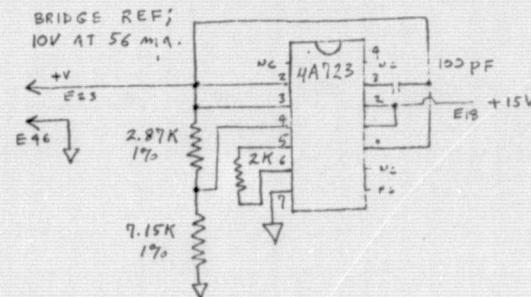
D



C



B



A

ORIGINAL PAGE IS
OF POOR QUALITY

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPD

D

E1 → TO DAV
 E1 → TO PANEL METER,
 REGEN. BED FAN ΔP.
 1.0 PSI DIFF = 5.0V

C

E4 → TO DAV
 E27 →
 E3 → TO PANEL METER,
 FIXED BED FAN ΔP.
 0.15 PSI DIFF = 5.0V

B

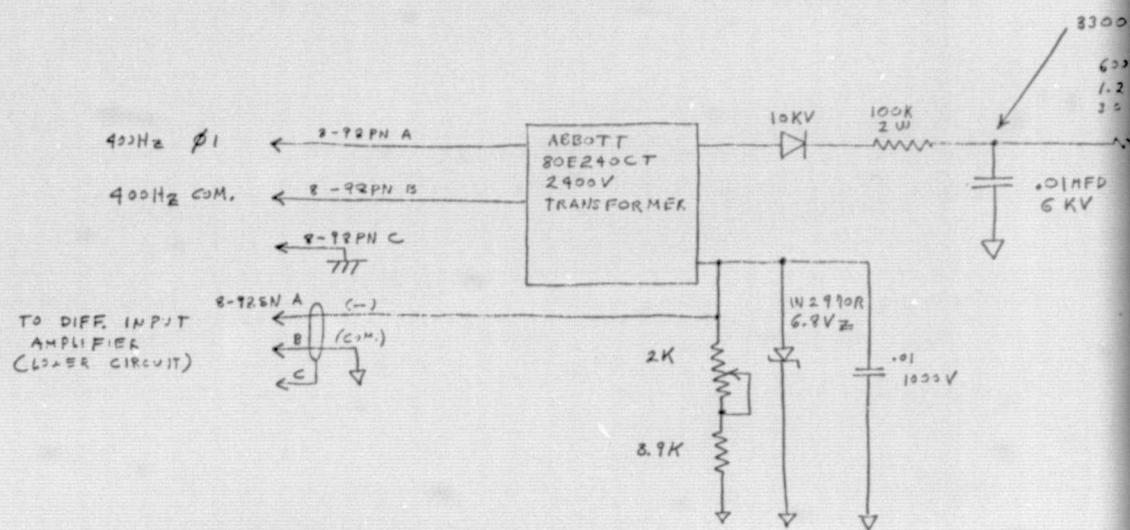
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
PARTS LIST							

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = ± 1/16 DECIMALS: .X = ± .1 .XX = ± .03 .XXX = ± .010 ANGLES = ± 2 DEG	DATE 3/2/73 DR 15- APPD APPD ENRG CHK APPD CONTR APPD	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA
NEXT ASSY	USED ON		SIZE	CODE IDENT DRAWING NO. REV
APPLICATION	CCA/CEI	D	CC-205	
		SCALE		SHEET 1 OF 1

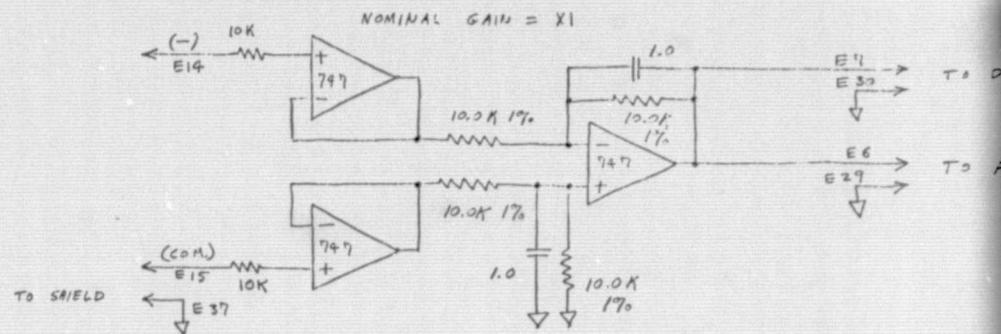
A

TCCS
ΔP CIRCUITS

D



B



A

ORIGINAL PAGE IS
OF POOR QUALITY

4

3

2

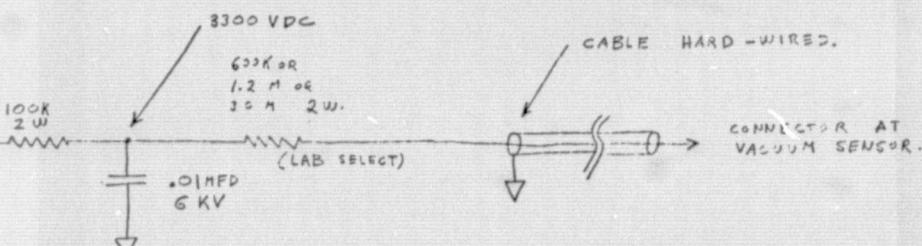
1

		REVISIONS		
ZONE	LTR	DESCRIPTION	DATE	APPD

LIMITED
CALENDAR
LIFE

LIMITED
OPERATING
LIFE

D

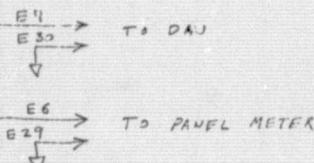


C

2970R
8V Z

.01
1000V

B

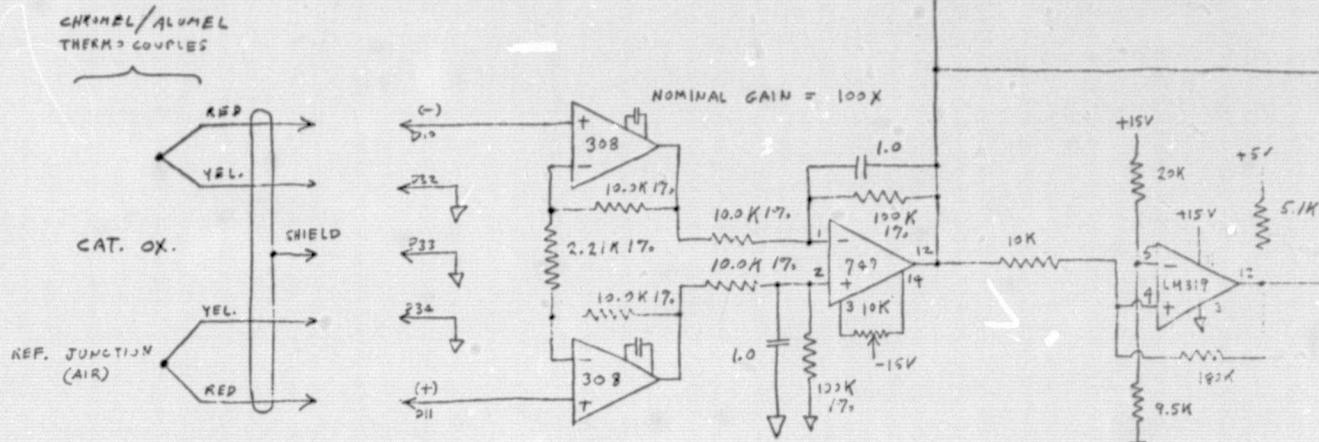


A

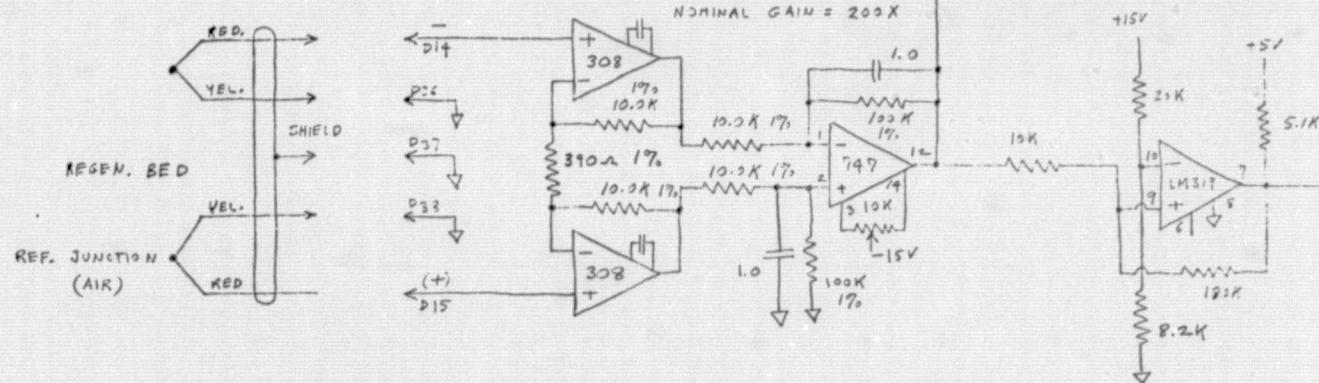
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPTI- ON OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.		
				PARTS LIST					
INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG		DATE 3/2/73 DR A. L. [initials]		LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
				APPD					
				APPD					
				ENGRG					
				CHK					
				APPD					
				CONTR					
				APPD					
NEXT ASSY	USED ON				SIZE	CODE IDENT	DRAWING NO.		
	APPLICATION	CCA/CEI			D		CC-206		
					SCALE		REV		
							-		
							SHEET 1 OF 1		

B-54
FOLDOUT FRAME 2

D



C

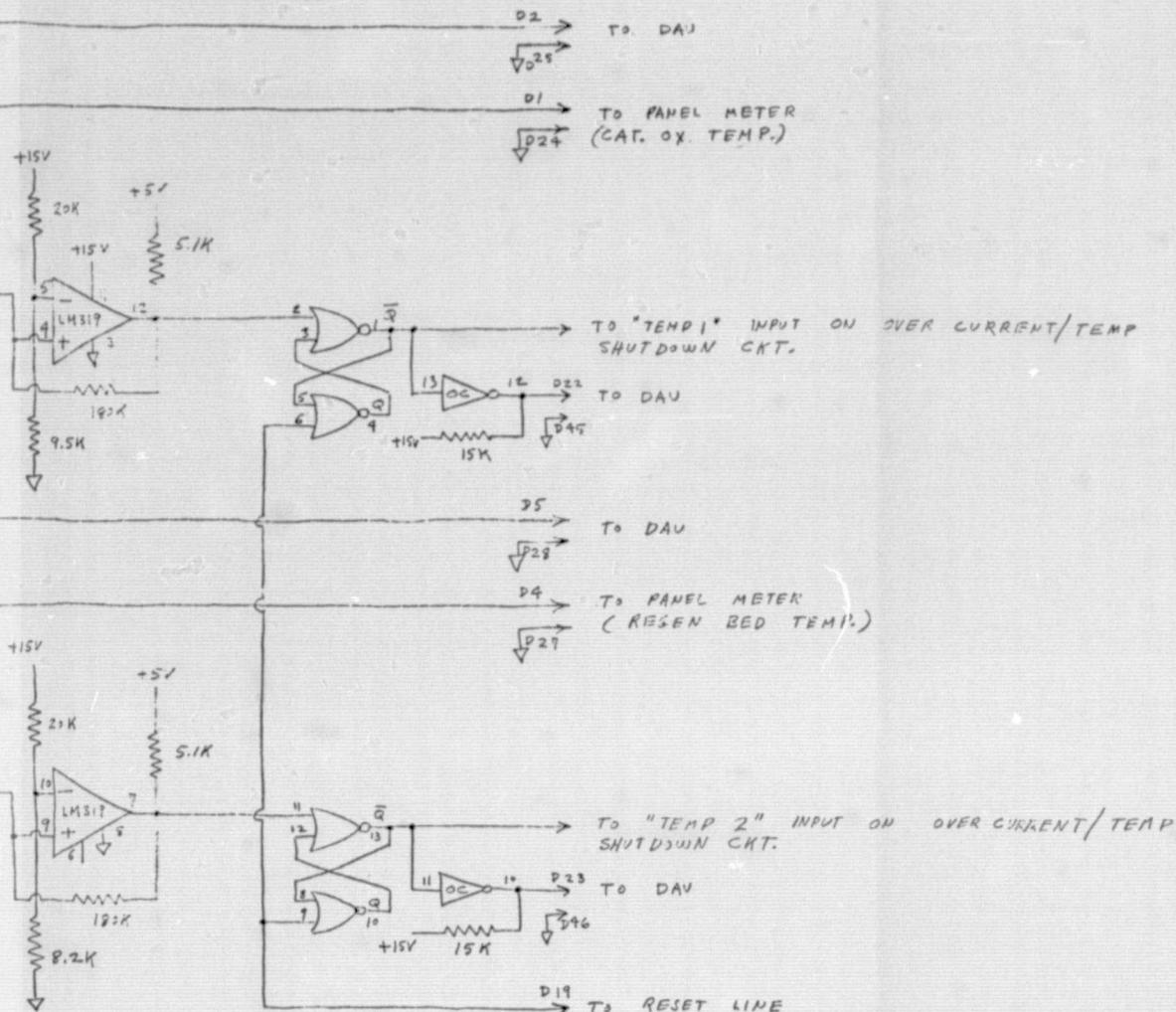


B

A

ORIGINAL PAGE IS
OF POOR QUALITY

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	REVISIONS	DESCRIPTION	DATE	APPD



QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRI- PTION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
PARTS LIST							

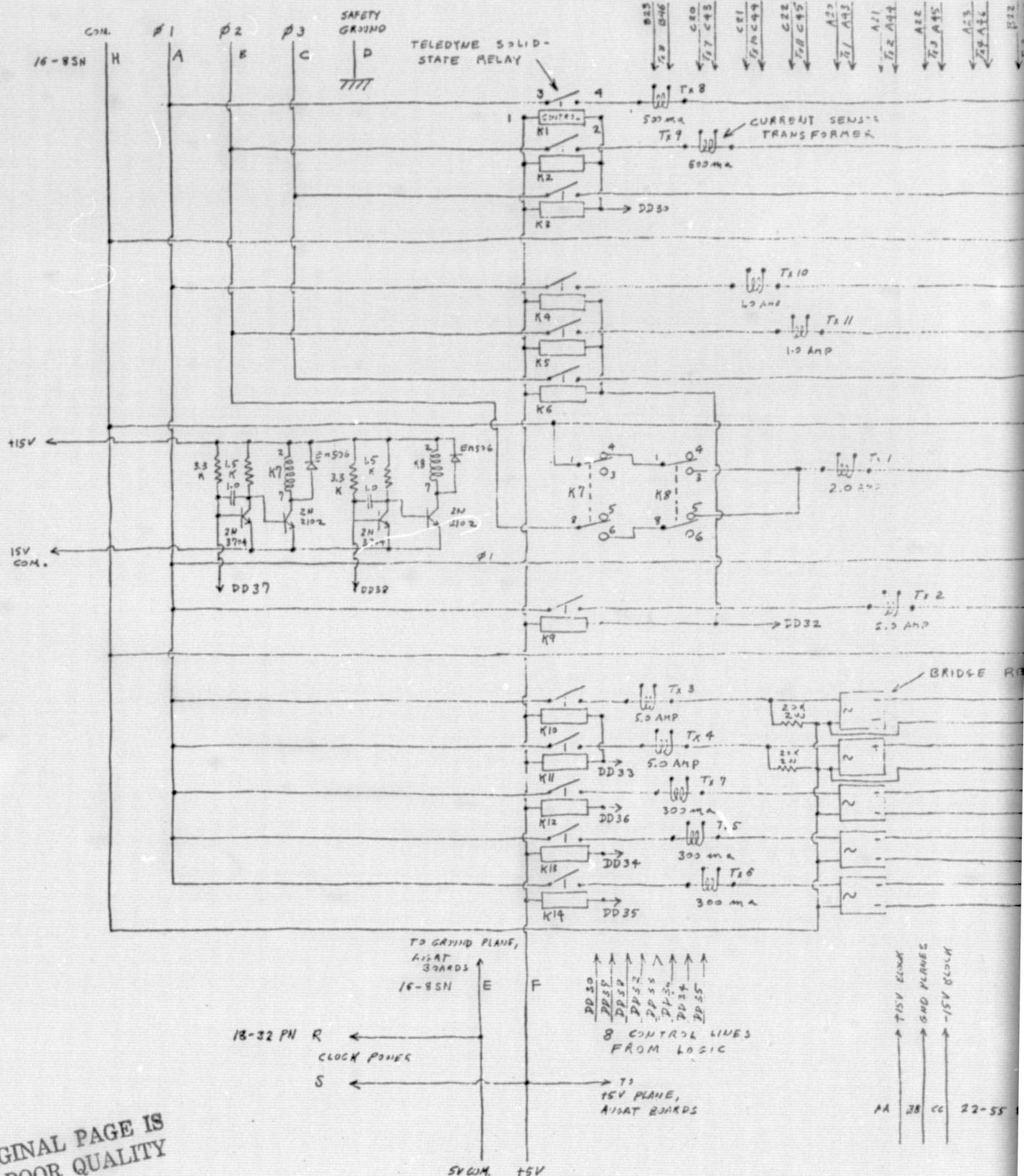
INTERPRET DWG PER	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG		DATE 3/2/73 DR R.S. L... APPD	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA			
	CONTR	APPD		TCCS TEMPERATURE CIRCUITS			
NEXT ASSY	USED ON	APPD	SIZE	CODE IDENT	DRAWING NO.	REV	
APPLICATION	CCA/CEI	APPD	D		CC-207	-	
			SCALE				SHEET 1 OF 1

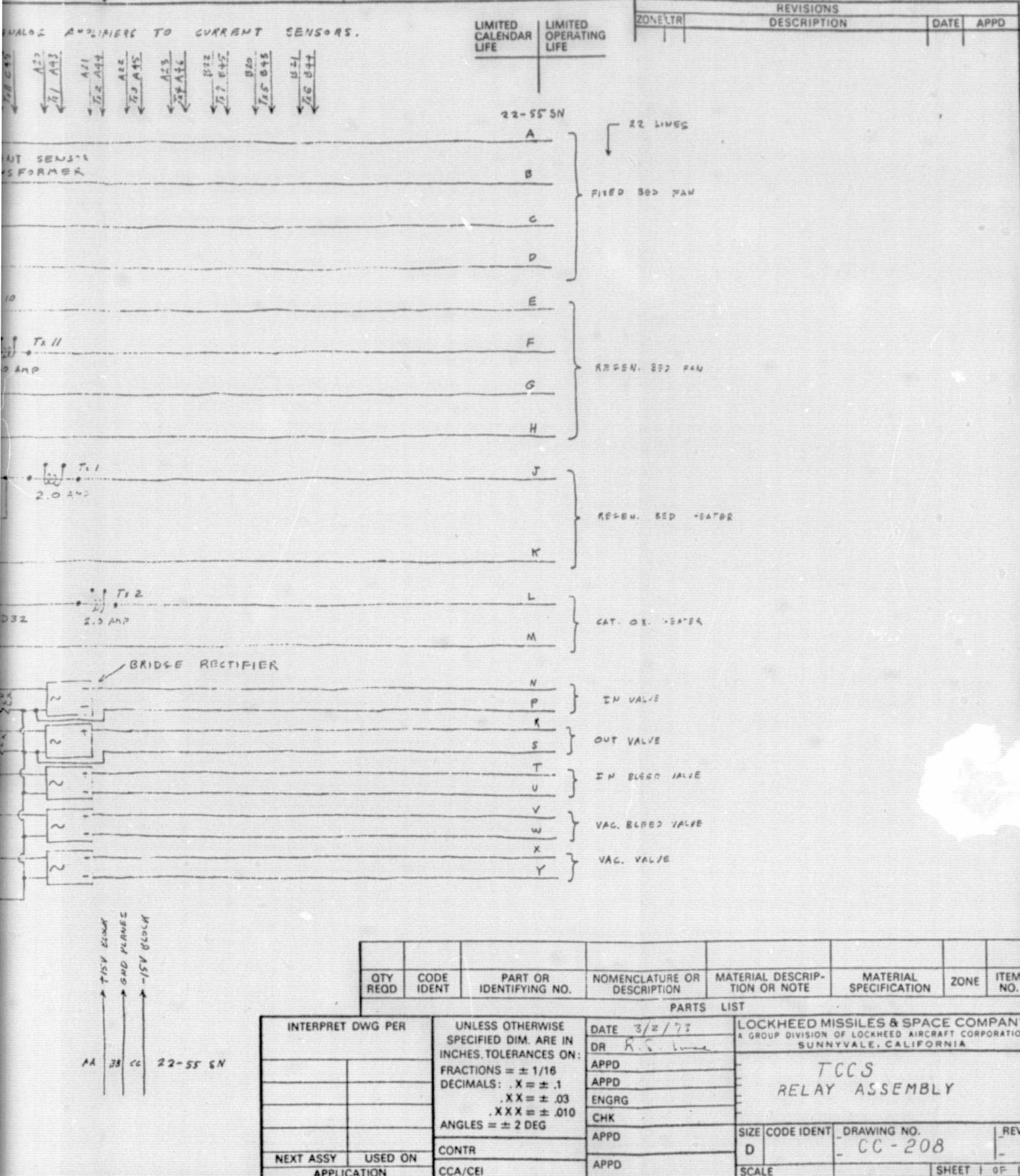
B-55

FOLDOUT FRAME

11 PAIRS OF LINES FROM ANALOG AMPLIFIERS TO CIRCUIT

D





D

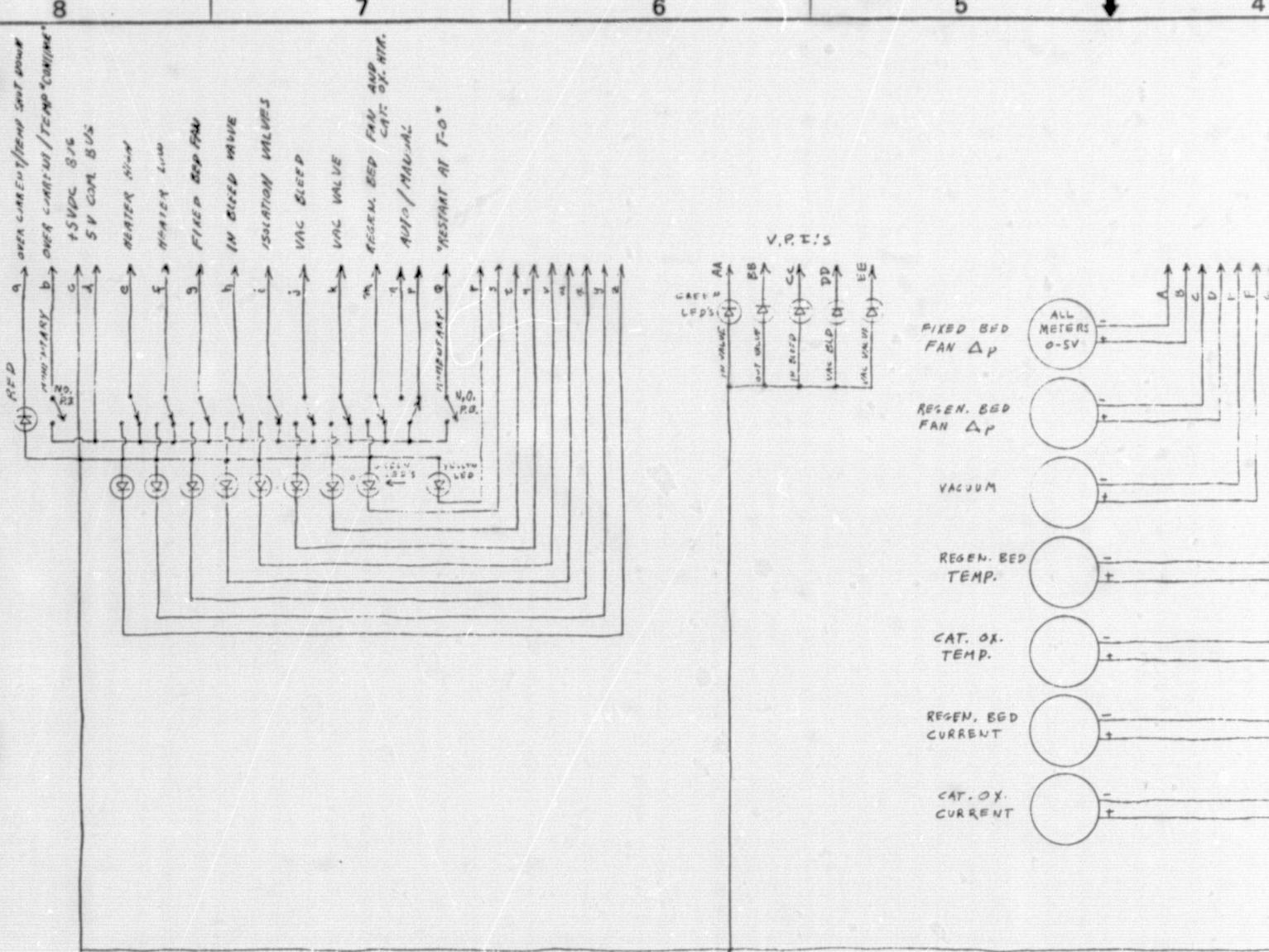
C

B

A

B-56

FOLDOUT FRAME 2



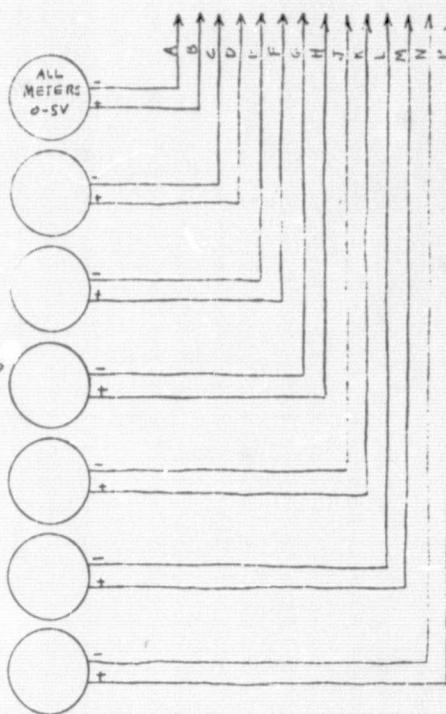
ORIGINAL PAGE IS
OF POOR QUALITY

LIMITED
CALENDAR
LIFE

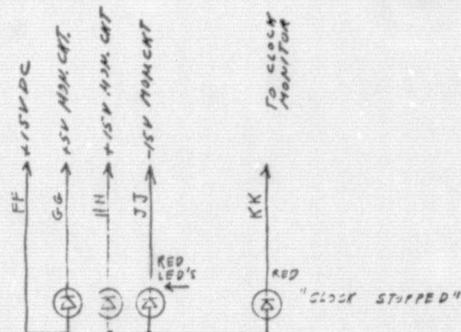
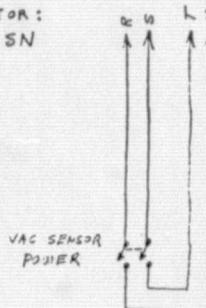
LIMITED
OPERATING
LIFE

ZONE LTR	REVISIONS		DATE	APPD
	DESCRIPTION			

BED AP
BED AP
VACUUM
SEN. BED EMP.
T. OX. EMP.
N. BED ENT
T. OX. ENT



CONNECTOR:
24-61 SN



D

C

B

A

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.
PARTS LIST							

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES. TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 3/2/73 DR 5-1-1 APPD APPD ENGRG CHK APPD CONTR APPLICATION	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA
			SIZE D CODE IDENT - DRAWING NO. CC-203 REV -	

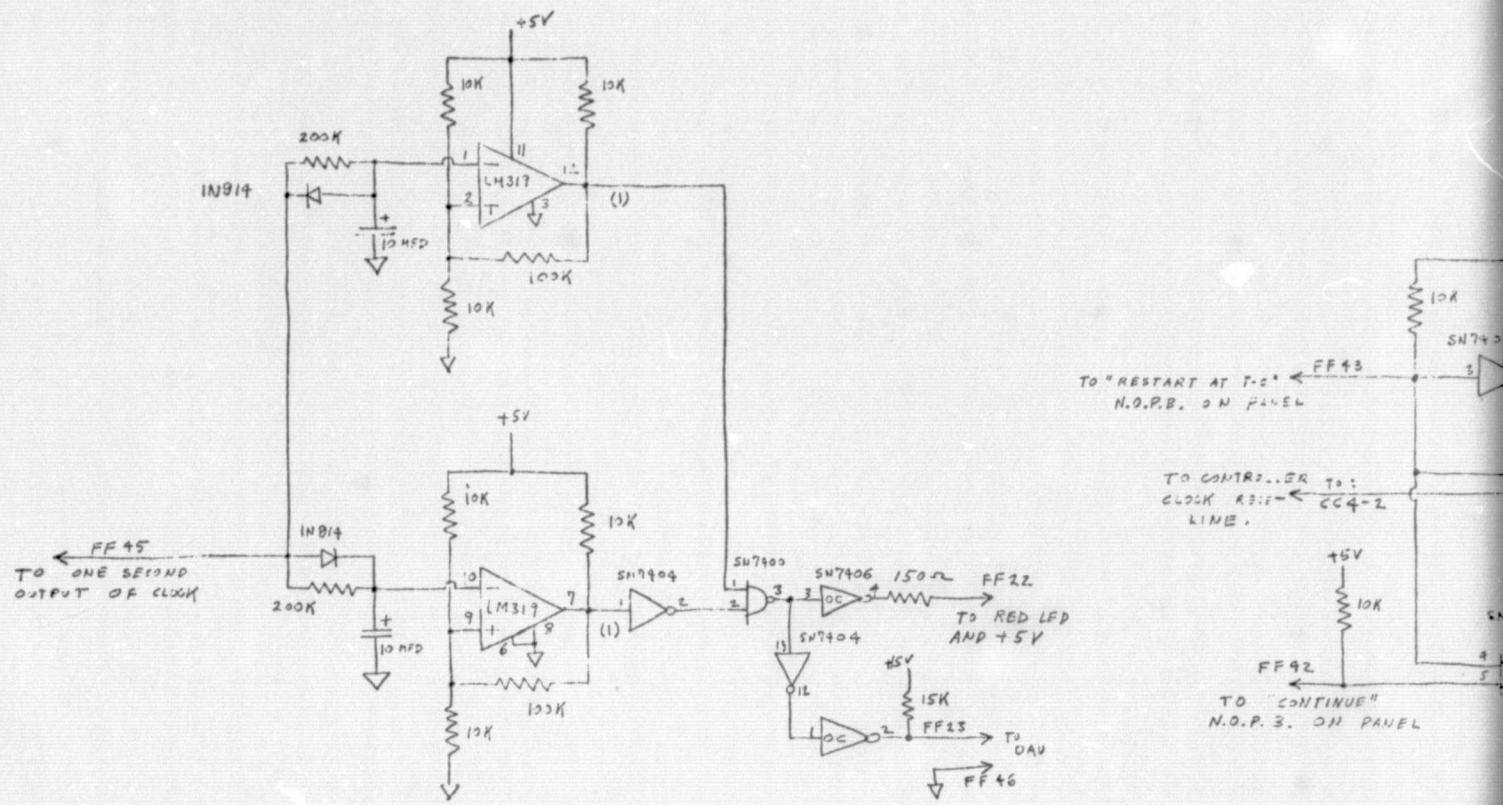
D

C

1

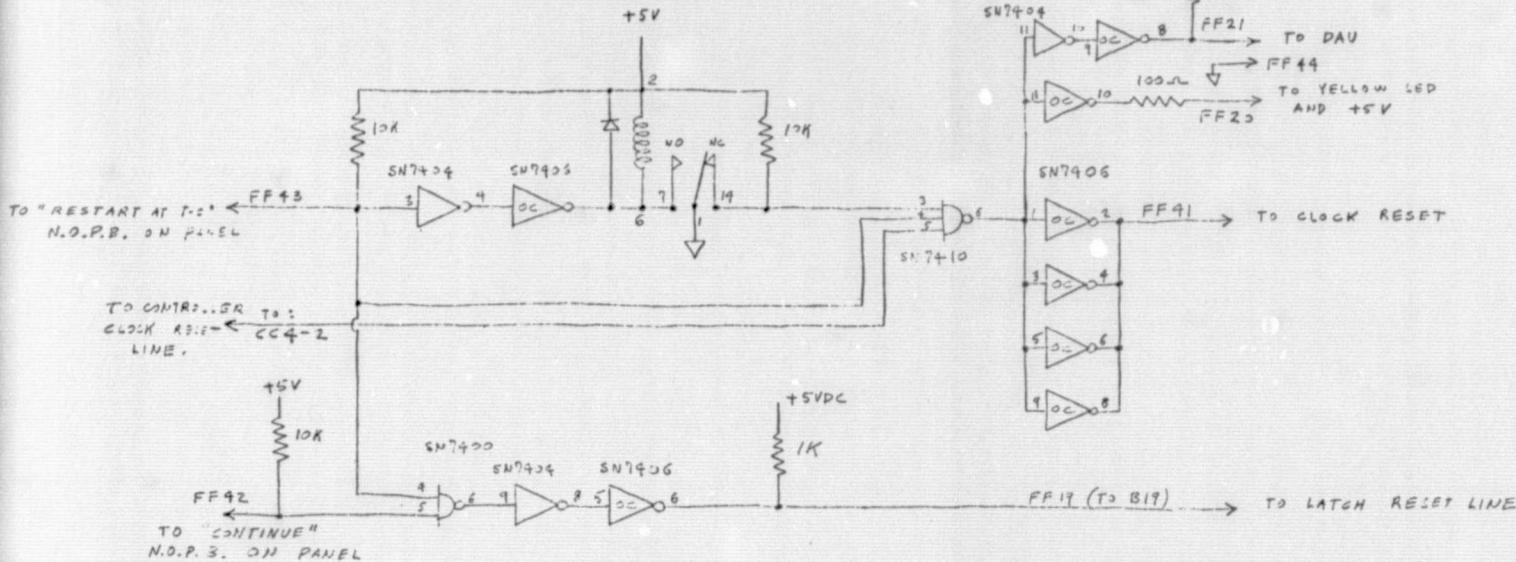
8

A



ORIGINAL PAGE IS
OF POOR QUALITY

LIMITED CALENDAR LIFE	LIMITED OPERATING LIFE	ZONE	LETR	REVISIONS	DESCRIPTION	DATE	APPD
-----------------------------	------------------------------	------	------	-----------	-------------	------	------



D

| C

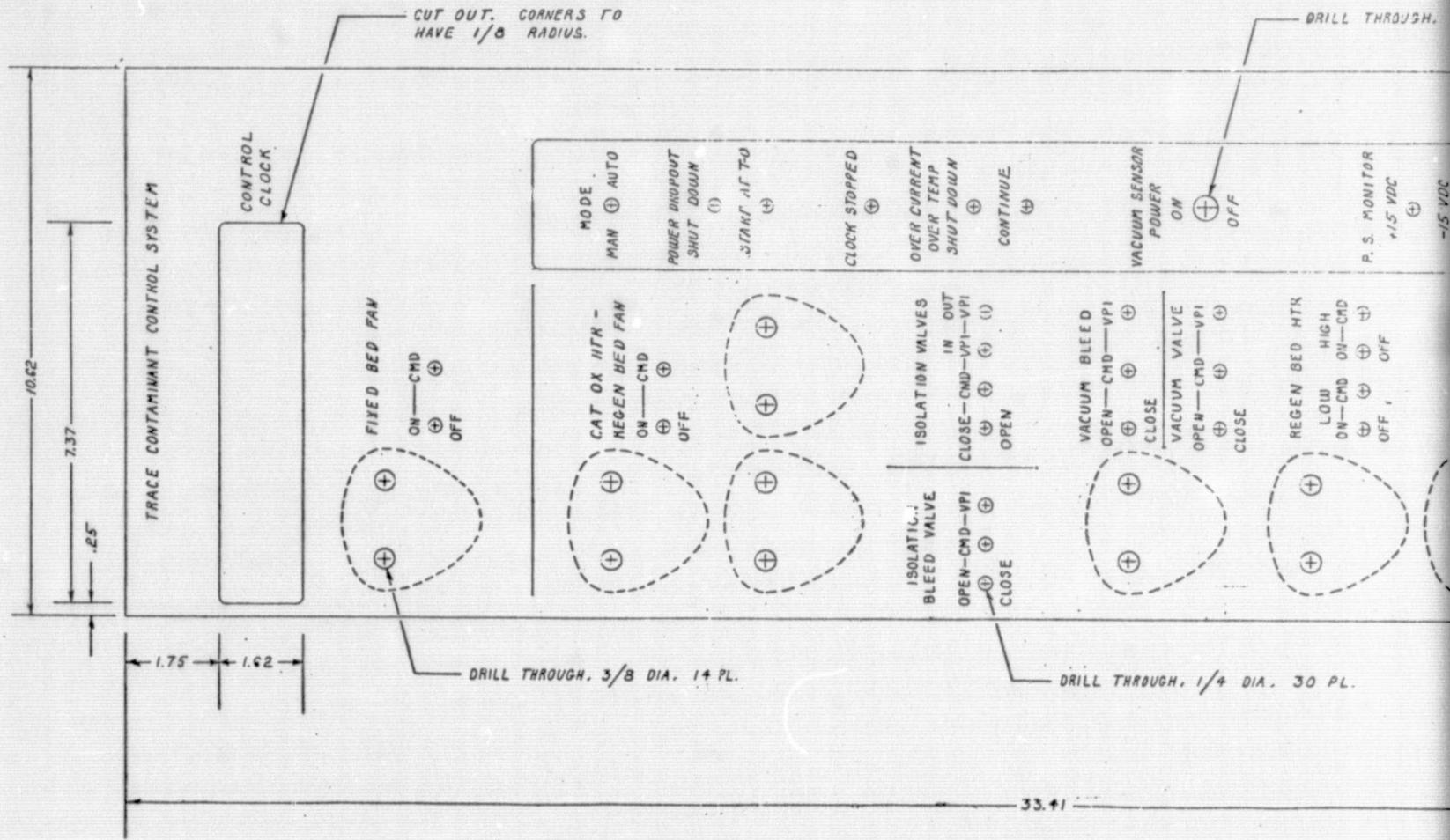
P

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL DESCRIPT- ION OR NOTE	MATERIAL SPECIFICATION	ZONE	ITEM NO.

INTERPRET DWG PER		UNLESS OTHERWISE SPECIFIED DIM. ARE IN INCHES, TOLERANCES ON: FRACTIONS = $\pm 1/16$ DECIMALS: .X = $\pm .1$.XX = $\pm .03$.XXX = $\pm .010$ ANGLES = ± 2 DEG	DATE 5/1/73 DR R. L. BURKE	LOCKHEED MISSILES & SPACE COMPANY A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA
NEXT ASSY	USED ON	CONTR	APPD	TCCS CLOCK MONITOR AND RESET CIRCUITS
			APPD	SIZE CODE IDENT DRAWING NO. D CC-210
			APPD	SCALE

B-58

FOLDOUT FRAME

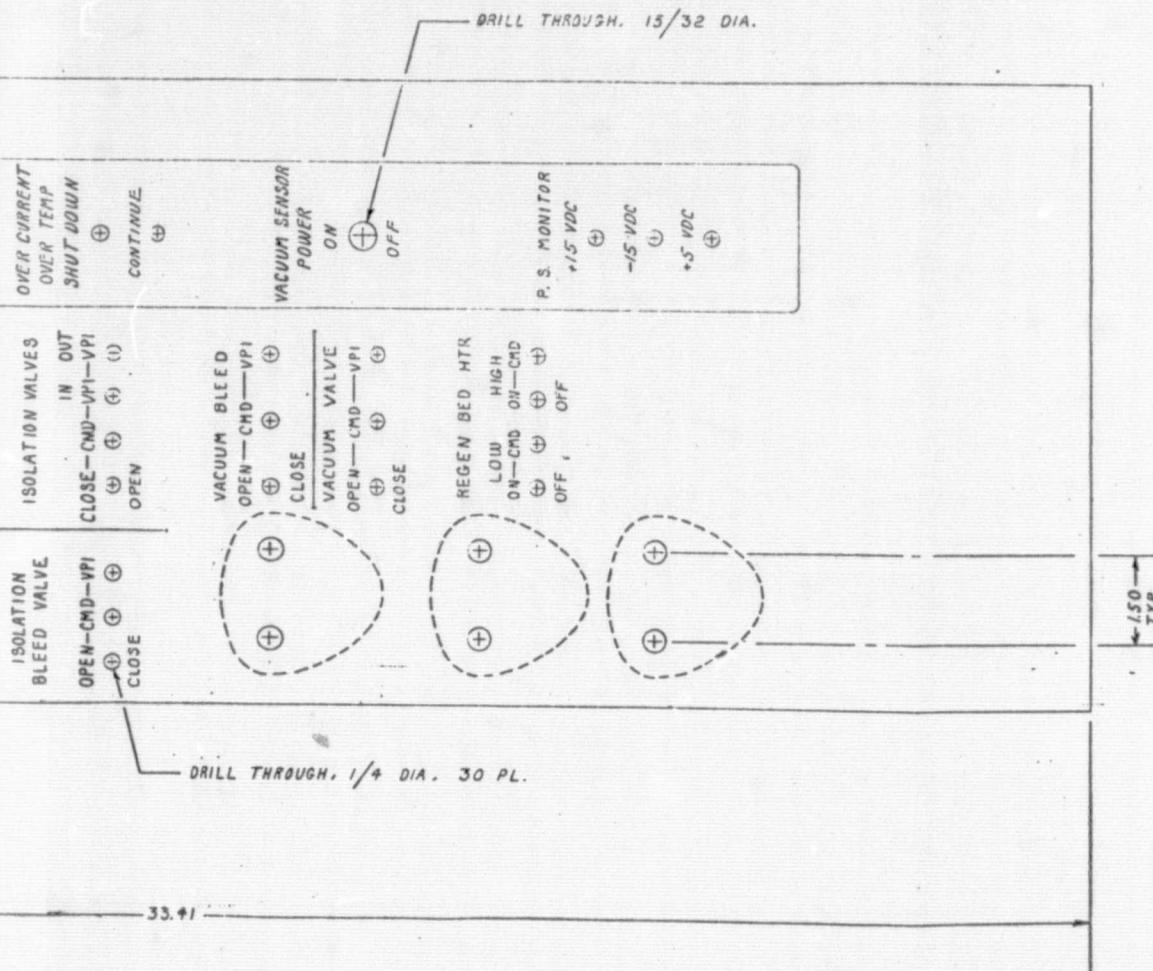


ORIGINAL PAGE IS
OF POOR QUALITY

NOTES:

1. MAKE FROM GO61-T6 ALUMINUM, .125 INCH THICKNESS.
2. DIMENSIONS NOT SHOWN MAY BE SCALED FROM DRAWING.
3. ENGRAVE APPROX. AS SHOWN. LETTERS TO BE $3/16$ INCH HIGH.
4. DOTTED LINES ARE TO SHOW METER POSITIONS ONLY, DO NOT ENGRAVE.
5. THE $3/8$ INCH DIA. HOLES FOR METER MOUNTING ARE TO BE ON 1.5 INCH CENTERS.
6. IRIDITE PER LAC 043B-030000. DO NOT PAINT. DO NOT FILL ENGRAVING.
7. ENGRAVED LETTERS TO CLEAR $1/4$ INCH HOLES AND $15/32$ INCH HOLE BY NOT LESS THAN $1/8$ INCH.

ZONE	LTR	REVISIONS	DESCRIPTION	DATE	APVO
------	-----	-----------	-------------	------	------



GTY	CODE	PART OR	NOMENCLATURE OR	ALUMINUM	GO61 T-6	ZONE	ITEM NO
REQD	IDENT	IDENTIFYING NO	DESCRIPTION	MATERIAL DESCRIPT.	MATERIAL SPECIFICATION		
PARTS LIST							
			UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. TOLERANCES ON: FRACTIONS: $\pm 1/16$; DECIMALS: $\pm .003$; XXX $\pm .003$; ANGLES: ± 2 DEG	DATE 4/12/73 DRAW. R.S. Luma	LOCKHEED MISSILES & SPACE COMPANY, INC. A SUBSIDIARY OF LOCKHEED AIRCRAFT CORPORATION SUNNYVALE, CALIFORNIA		
			INTERPRET DWG PER	APVO	TCCS		
				APVO	CONTOL PANEL		
				APVO			
				CHCR			
				APVO			
				CONTR			
				APVO			
			APPLICATION	CCA/C1/PD	SCALE CALL	DRAWING NO	REV
						CC-211	-
						SHEET 1 OF 1	